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THE IMPACT OF TRUST
ON EMPLOYEE COMPETENCE UTILIZATION
IN A BUSINESS EXCELLENCE SETTING

DOCTORAL THESIS

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ANNOTATION

Especially medium sized companies in the manufacturing industry are currently affected by a skilled worker shortage as well as being increasingly reliant on junior staff and experienced workers reaching retirement age. Positioned in this special context it is not only essential to choose the right employees but also to realize the potential of existing competencies; an aspect that deserves closer attention especially since human resources are seen to be the 'vital' differential advantage for a company. Being aware of these inter-relations it may not simply be a monetary goal but also an immaterial cultural target to provide an atmosphere that allows the abilities of its organization to unfold. The research study makes the assumption that a culture of trust is the adequate instrument to support employee competence utilization and investigates this impact in a business excellence context. This is done by the analyses of existing literature and conceptualizations to develop a new integrative model on the impact of trust on employee competence utilization in the organizational context. The empirical evaluation of the model is based on a survey directed to employees of selected companies in a pragmatic mixed methods application. This analysis is made in order to challenge the particular character of trust in organizations. In addition the intention is to evaluate how the impact of trust on employee competence utilization can be realized through strategic management, resulting in a recommended course of action providing companies with a valuable strategic advantage. This approach is directed towards the business excellence context in order to render the idea that its philosophy might be supportive to the interrelation of trust and employee competence utilization. As a result, the empirical study suggests a significant positive correlation between trust and employee competence utilization, albeit the strength of correlation is focused on particular elements discovered. However, trust as a complex holistic concept is not easy to grasp; being a particular resource 'trust' eludes a purely strategic approach and has to be balanced with the special needs of a fragile human resource. Benevolence and goodwill assumed results suggest that trust can indeed be seen as a catalyst for changing existing patterns of thought and behavior, a basic condition for competence utilization. As to the conceptualization, results support the integrative approach including character, relationship and trust behavior, even highlighting relationship aspects. Beyond the results strongly suggest that 'business excellence' is able to function as an institutionalized system providing neutralized scope to allow multiangulation and challenge, necessary and enriching aspects within the trust concept especially towards continuous improvement. In order to make the concept applicable, a balanced scorecard approach is taken.

Keywords: trust, employee competence utilization, business excellence, strategic management

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LIST OF ABBREVIATIONS

BE	Business excellence
bmi	Bundesministerium des Inneren, National Department of Statistics
B-N	Sectors of Economy
B-N,P-S	Business Register in Germany, Selection of Economic Sector B-S
CETPM	Center for Excellence in Total Productive Management, at University for Applied Sciences in Ansbach
ECU	Employee Competence Utilization
EFQM	European Foundation for Quality Management
EOC	Employee competence utilization -Over-obligatory performance-Commitment
EOE	Employee competence utilization -Over-obligatory performance-Engagement
EPP	Employee competence utilization -Productivity per Employee-Positive target fulfilling Action
ERA	Employee competence utilization -Retention-Average Retention time/employee
ESG	Employee competence utilization -Satisfaction-Growth Perspectives
ESI	Employee competence utilization -Satisfaction-Intrinsic Motivation
ESM	Employee competence utilization -Satisfaction-Meaningfulness
EU	European Union
HRM	Human Relationship Management
ifm	Institut für Mittelstandsforschung (Institute for Medium-sized Businesses)
JIT	Just in Time
KPI	Key Performance Factors
MBNQA	Malcolm Baldrige National Quality Award
MINT	Mathematics, Informatics, Natural science, Techniques
OE	Operational Excellence
PDCA	Plan-Do-Check-Act
P-S	Sectors of Economy
SC	Social Capital
SDCA	Stabilize – Do – Ceck-Act
SME	Small and medium sized enterprises
T	Trust

TCA	Trust-Clear Goals-Accepted Goals
TCC	Trust-Clear Goals-Clear allocation of resources
TCS	Trust-Clear Goals-Shared Norms
TCV	Trust-Clear Goals-Visibility/Direction of Goals
TDA	Trust-Empowerment-Ability to take responsibility
TDD	Trust-Degree of freedom-Delegation level
TDE	Trust-Delegation-Empowerment
TFA	Trust – Fairness – Accountability
TFC	Trust-Fairness-Confidence
TFF	Trust-Fairness-Failure Culture
TFJ	Trust-Fairness-Justice
TFR	Trust – Fairness – Reciprocity
TNC	Trust-Network Structure-Communication
TNI	Trust-Network Structure-Information
TNO	Trust-Network Structure-Opportunity for regular interaction
TPM	Total Productive Management
TQM	Total Quality Management
VDI	Verein Deutscher Ingenieure (Association of German Engineers)
VDMA	Verband Deutscher Maschinen- und Anlagenbau (Association of German machine- and plant engineering
WZ2008	Sectors of Economy, see B-N, P-S
ZEW	Zentrum für europäische Wirtschaftsforschung (Center for European Economic Research

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INTRODUCTION

Topicality

The scope of action of each company towards its desired goals becomes clear in the balance between internal resources and requirements of the market. The consideration of company resources is initially oriented towards the question of whether the actual resources are adequate to achieve the defined goals. It is therefore essential to utilize the given potential in the best possible way.[1] Furthermore, the recognition, appreciation and involvement of human resources is of special importance as personal intangible resources such as personnel are considered to be more durable and less susceptible to limitations than other types of assets.[2] Therefore the human factor is seen as one which really makes the difference.[3] This aspect is especially valid in times of skilled worker shortage, a serious issue not only due to demographics but also to shortfalls in the educational system; a climate which is not expected to change. The intensity of international competition as well as increasingly complex technological processes combined with low birth rate and increasing life expectancy is expected to continue triggering this effect in future.[4] This situation means that sustainable employee loyalty and commitment come into the forefront. Only when the company meets the expectations of its employees towards the organization will they be motivated to go the extra mile and develop their full potential and so also enable maximized performance.[5] The power of willingness is reflected in the effort exerted by the employee and affects his or her contribution to organizational success.[6] Especially medium sized companies in innovative sectors need to pay specific attention to these effects as they are significantly affected by the skilled worker shortage as well as being largely reliant on junior staff and experienced workers reaching retirement age. Not surprisingly, factors such as a good working atmosphere and self-directed work rank highly amongst employees in the selection of their respective employer.[7] The community of medium-sized companies with between 50 and 1000 employees in the manufacturing industry and in the context of business excellence environments targets a

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[1] Eberl (2009), p. 34/ 35, 58/59, she also refers to Gutenberg 1983 and Bouncken, 2003 p.23 *Eberl says: 'It is no surprise that the idea of organizational competencies has a central meaning in the frame of strategic questions.'*
[2] Barney (1991), p. 110
[3] Storey (1995), p. 4,9, Storey says: *'It is human capability and commitment that distinguishes successful organizations from the rest.'*
[4] Bräuninger (2013), p. 10 ff
[5] Pryce-Jones (2010), p. 4
[6] Schmitz (2005), p. 48
[7] Bräuninger (2013), p. 10 ff

group of companies that is directly confronted with these issues.[8] Positioned in this special context the research study makes the assumption that it is not only essential to employ appropriate staff but also to fully realize existing competencies. It is assumed that a culture of trust is the adequate instrument to support employee competence utilization and with this build and retain a committed workforce. The immaterial resource of 'trust' may thus play a key role in strategic management. From a management perspective it is of high interest to understand the interrelation between trust and employee competence utilization and to be aware of key points in trust-supporting-frameworks. The establishment of direct and indirect measurables and subsequent realization in a strategic scorecard approach may thus be seen as a valuable competitive advantage for strategic work.

The purpose of the dissertation is to evaluate the impact of trust on employee competence utilization in a business excellence environment and to derive strategic implications for managers in manufacturing companies from it.

The tasks are:

- Analyze existing literature and conceptualizations on trust and competencies and compare the different contemporary views in order to build a conceptual framework for the impact of trust on employee competence utilization.

- Develop an umbrella perspective on business excellence based on communalities between different systems in place in order to investigate on a mutual basis between the concept of trust and the philosophy of business excellence.

- Develop an integrative model on the impact of trust on employee competence utilization within the organizational context.

- Assess and discuss different measurement approaches applicable to trust and competencies and develop an appropriate research design from it.

- Substantiate a qualitative selection approach based on two pilot studies directed to management and business excellence experts.

- Evaluate the model empirically based on selected medium-sized company cases in the manufacturing sector.
    - Execute management interviews based on a mixed methods approach.

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[8] Bräuninger (2013), p. 10 ff , he refers also to Stiftung Familienunternehmer'(2011): ‚Attraktivität von Familienunternehmen als Arbeitgeber. Eine empirische Untersuchung der Sicht junger Akademiker; Bearbeitet vom Wittener Institut für Familienunternehmen'; Study between 2008 and 2011 on the recuiting fair among 465 employees

- o Execute an employee study in a cross-section of all companies (n=206) based on a pure quantitative approach.
- Analyze the results with statistical methods and structure the data to make predictions and understand multiple implications of the topic.
- Deliberate as to whether additional insights from the research study lead to further differentiated and specified outcomes, enriched by a substantive explanation testing theory in order to uncover possible causal relations.
- Give answers to the impact of trust on employee competence utilization considering the particular character of trust and its correlates towards challenges for strategic management.
- Recommend a course of action for strategic management with regard to best practice.
- Apply a balanced scorecard approach to provide a measurable approach towards trust and its supporting frameworks.

The object of the dissertation is medium sized organizations in the manufacturing industry in Germany in the business excellence context.

The subject of the dissertation is the impact of trust on employee competence utilization.

The main research question is: 'Does trust perceived by an employee towards management lead to a higher utilization of their own competencies? This question is embedded in an organizational context and considered in the framework of a business excellence setting. It is accompanied by the following sub-questions: 'Which aspects of the chosen trust concept have the strongest impact on employee competence utilization?' 'Do the results support the integration of trust action into the model?' 'Should the mission of strategic business management be the creation of mutual trust?' 'Is business excellence to be seen as a system that positively impacts the creation of mutual trust?' Whereas the research question builds the basis for the main empirical study, the sub-questions are mainly touched on throughout the pilot study and in interviews with management as well as the results of the final interview section with experts in the field.

The basis hypothesis is directed in type: H_B: The higher the level of trust, the higher the level of employee competence utilization.

The core data being used to test this hypothesis is gathered based on a quantitative employee questionnaire with a sample size of 206. Supplementing information and explanation is

based on pilot studies, expert surveys and management interviews. In order to allow a comprehensive analysis and interpretation of data a number of propositions have been defined with regard to

- the relative impact of personal characteristics, rational characteristics and situational factors (P_B1- P_B3)
- the relative emphasis between specific factors of the trust concept (P_B4)
- the impact of trust on innovation (P_B5)
- the impact of specific 'trust-vignettes' on employee competence utilization (P_B6)
- the relation between business excellence elements, trust and employee competence utilization (P_B7- P_B8)

These propositions are organized along with the research model. The underlying data is completely gathered from the quantitative employee survey but again in its analysis and interpretation enriched by theoretical insights and qualitative supplements.

The novelty of the dissertation is focused on the following aspects:

- A new integrative model on trust in organizations, considering the trust level of employees with respect to management, is developed and empirically tested for use in strategic management.
- The impact of trust on employee competence utilization is discovered within the business excellence context providing insight on personal and institutionalized trust.
- An umbrella perspective on business excellence is developed, incorporating essential elements of major quality systems and focusing on the strategic approach.
- With respect to the particular character of trust, key points for trust supporting frameworks, applicable for strategic management are derived and translated into a balanced scorecards approach in order to provide a measurable framework for trust.

Method used

The basic methodology of this research work follows a pragmatic approach and makes use of mixed methods in order to cope with the complex and dynamic character of trust and competencies. The fundamental approach is positivistic in so far as a theoretical framework is developed first which leads to a subsequent hypothesis. But the preferential way of this research study is to analyze the data in a quantitative manner and complement those results with quantitative and qualitative elements from additional semi-structured analysis. This approach considers also the sociological background and the complexity of the trust concept and challenges

the model not only on the basis of the resulting coefficients of determination but also based on theoretical reasoning. Not necessarily the grade is decisive for the interpretation of results, but also a positive and significant correlation between the monitored variables that exists. The arguable room to maneuver for this research study is seen to be a significant correlation coefficient between $r = 0,20$ and $0,60$ as long as it can be substantiated with theory or qualitative research results. With this intention various propositions were developed and further sub-questions had to be answered additionally, not only focusing on absolute numbers. Therefore the purpose of this research study is analytical in its main empirical part. Following a deductive logic the selected theory approaches and underlying conceptualizations of the research study are concluded in a structural equation model that had to be tested empirically in a further step. As the research study is based on existing grounded theories it should be seen as applicable to a specific, existing problem. Specifically this research study is organized in separate steps. First existing literature is reviewed in order to summarize and analyze the current state of research of the relevant concepts. In order to prepare the subsequent main empirical study and to further approach the concrete situation to which the research question should be directed, the industrial contexts as well as the relevant conceptualizations are specified. In the second step, two pre-studies give a practical reflection of the relevance of the research in an explanatory approach. Both pre-studies also founded the basis for a strategic approach and the positioning of the main empirical study within the business excellence environment. Another outcome of the pre-studies was the decision to base the pre-selection of companies for the main empirical study on a qualitative approach. On this basis the companies finally involved in the main study were well-defined and selected. A major criterion was the involvement in a particular business-excellence-circle. In the third step the main empirical study was executed. Expert interviews were conducted with the managing directors of 11 companies executed in the form of semi-structured personally directed interviews; all being part of the business excellence community. The motivation for this investigation basically referred to the selection of companies to be involved in the subsequent quantitative employee study. The qualitative selection criteria applied to the companies was confirmed by the results from interviews with managers. Six of these 11 companies were finally involved in an additional comprehensive employee questionnaire of a purely quantitative nature. As a result a sample of 206 employees constituted the correlation analysis between the indicators of trust and the indicators of employee competence utilization on a purely quantitative basis: this build the core of the empirical study and allows the comparability of results. This number

comprises of 20-50 employees from each respective company. A written online self-completion questionnaire was the preferable instrument of data collection. Statistical methods used were based on Spearman's rho, as a nonparametric measure of choice. Finally reflections and implications of the results and conclusions were discussed in open interviews with experts in the field. This approach is also to be seen as a contribution of qualitative elements towards quantitative results. Based on these comprehensive results a final assessment has been made and the key research findings and conclusions have been formulated. And so, the overall applied method is mixed, giving additional supportive insight compared to a pure quantitative study. But in order to allow the study focusses on a quantitative survey in the main empirical section.

The content of dissertation

Chapter 1 gives a general introduction to the field. Organizational theory, business excellence and trust within the theory of social capital and competencies are explored through existing literature. Based on the background of past conceptions, the opinions of a selection of authors are considered, illuminating the changes in frameworks as well as the development of new approaches. Further to this concepts are explained and distinguished from each other before being applied to the organizational context. This approach is taken in order to establish a basis for the identification of the problem in chapter 2.

Chapter 2 relates the research problem to the chosen conceptual framework. Applicable conceptualizations are analyzed and the respective industry specification of medium-sized organizations in the German manufacturing industry is defined. In this course it also reflects on its actuality and originality. Based on statistical data and information from other sources appropriate for the scientific research, a stepwise approach from the general context to the concrete contemporary situation is made. Supported by the results of two pilot studies executed 'pre ante' in order to challenge the research approach and confirming its relevance the context of the following main empirical study is prepared. Subsequently the author derives specific elements from the given conceptual framework and develops a new integrative trust model for organizations. With the successive verbalization of the research question as well as the definition of the respective hypothesis the second part is concluded.

Chapter 3 follows with the presentation of the empirical study. Interviews of management and employee questionnaires are explained in their mixed methodological approach and with respect to the empirical proceedings. This chapter also concentrates on the results of the different empirical parts in order to illuminate the correlation between trust and employee competence

utilization. Based on a combined view on the empirical results and theoretical insights the closure of the knowledge gap is approached. Reflections on learnings, limitations and downsides are referred back to theory as well as being challenged by experts in the field of business excellence, trust and competencies. Finally in the last part of the dissertation the threads are brought together in the conclusion, with implications for praxis and suggestions for strategic management and further research.

Data and Limitations

Boundaries to the topic are purposely given by the selected industry focus and the contextual frame of business excellence. All companies involved in the empirical study are medium-sized manufacturing companies in Germany thus allowing generalization within this particular context. As a choice only the employees' perception of trust towards management and the organization was measured; and not management trust of employees. In order to focus on the research question some restrictions have been made from the outset. Neither personal characteristics of involved people nor time effects on trust have been taken into consideration. With the focus on the aspect of competence utilization, willingness on the part of the employees was perceived as a matter of choice. An adequate level of ability required to carry out the job was taken as given. The collected data is seen to be valid and results to be reliable as they are predominately based on quantitative measures.

Main Results

Relevance: Trust correlates to risk and complexity. In addition trust is of value if neither employee behavior nor result control is applicable. Not only does trust reduce transaction-cost, it furthermore also frees potential otherwise not available. Theory suggests that frameworks established through a culture of trust positively influence the utilization of employee competencies. An increased utilization of employees' potential is not only expected to increase the performance of the company, it also supports its competitive advantage by using a resource which is more durable and less susceptible to limitations than other resources. Research also suggests that commitment, being an element of employee competence utilization, supports long time employment, which is explicitly valid in times of skilled worker shortage which medium sized companies in Germany are currently confronted with. As a result theory supports the relevance of the topic of research for strategic management in organizations and makes a sustainable strategic approach valuable.

Research question: 'Does trust perceived by an employee towards the management lead to a higher utilization of their own competencies? In general it can be stated, that, based on the empirical results, the correlation between trust and employee competence utilization is supported. Results of the empirical study do show that trust is positively and significantly correlated to employee competence utilization with a strength of r = 0,455**. Based on this result the directed hypothesis H_B, *'The higher the level of (perceived) trust, the higher the level of employee competence utilization'* was not falsified. Based on the sociological background and the complexity of the trust concept a medium to low but positive and significant correlation was expected. However these results have to be deliberated as to whether additional insights from the research study lead to further differentiated and specified outcomes. Not only results are based on a particular concept of indicators characterizing the latent variable, also the research model implies complex causal structures of multiple latent variables which are simultaneously examined. The challenge of 'multi-collinearity' is implied. Not only results are based on a particular concept of indicators characterizing the latent variable, also the research model implies complex causal structures of multiple latent variables which are simultaneously examined. As a consequence the results cannot just be seen as absolute numbers, subject to a 100 percent effective interpretation. Further to this results need to be enriched by a substantive explanation testing theory. With this intention various propositions were developed and further sub-questions had to be answered additionally.

Model: As to the conceptualization the decision was made to include 'trust-based-action' into the model and take a combined view of trust and employee competence utilization. Results showed significant correlation between personal characteristics and employee competence utilization, though on a low level of r = 0,265**. Within the elements contributing to trustworthiness the highest results were achieved for benevolence (r = 0,321**) and predictability (r = 0,261**), both subsumed under the aspect of fairness in the author's model and both being supported by theory. A comparable situation appeared for the contextual elements of the model, focusing on the question of whether allowance should be given for self-directed action. Correlation results were on a low level as well, with r = 0,196**, but again being significant. Within the contextual elements explicitly the ability to take responsibility ranked highest of all indicators with r = 0,692**. As a result, personal characteristics and situational context factors show low strength of correlation; nevertheless since some of their specific indicators are still in an acceptable range as being defined previously in the research study they cannot be neglected in

their relevance for the integrative model. Notably they are supported by theory, too. Relationship elements gave high correlation results on a much higher level compared to personal characteristics and contextual elements with r = 0,450**. Given medium correlation strength, results are seen to be supportive of the integration of trust behavior into the model of the research study in highlightening the importance of network and interaction and also referring to the theoretical insight that the highest quality level of trust is reliant on relationships. Specifically indicators such as accountability (r = 0,649**), accepted goals (r = 0,601**), shared norms (r = 0,596**), open communication (r = 0,582**), and the ability to take responsibility (r = 0,692**) are strongly interrelated with the investment of employee competence in the form of exceptional performance and satisfaction. A direct significant correlation on an acceptable level between trust and productivity and retention could not be proven, albeit this result does not lead to a refusal of the relationship in general. Nevertheless results might lead to the assumption that the different indicators of employee competence utilization chosen for the research model might need to be conceptualized in a stepwise approach. Basically the integrative approach on trust was supported, especially as particular indicators of all levels of the model could be discovered.

Moving a step further and touching on trust specific situations, 'trust-vignettes', it is of interest to see how these correlate with employee competence utilization. Situations referring to problem solving rather than problem description and the acceptance of decisions show the highest correlations towards employee competence utilization. Also the aspect of employees' failure handling as well as seriously taken constructive criticism show significant correlation with employee competence utilization. Although the strength of correlation is seen to be on a lower level (r = 0,357**), its relevance in practice is valid, as those vignettes were developed explorative in the context of qualitative elements of the empirical study. On a theoretical level, but also as a reflection of these specific results, the aspect of institutionalized distrust is discussed in the research study. In the same manner as it is basically not wrong to accompany a culture of trust with elements of control, trust and distrust also can be seen as two independent concepts that under particular conditions can be mutually supportive. These aspects are of importance as soon as systems like business excellence come into the picture; an aspect being approached in another sub-question. Systems like these, provided they are well implemented, may promote the balance of trust or institutionalized distrust. Thus is can be assumed, if distrust is institutionalized, that it might even support a trustful atmosphere. These aspects are explicitly discussed in the innovative part of the competence concept. With this proviso in depth knowledge and relationship trust may

be seen as a valid element of strategic management; an issue also being approached in one sub-question. This element is valuable as it increases with usage but at the same time is fragile and requires a basic positive attitude towards human nature. These considerations were confirmed throughout the concluding interviews.

Used Sources

Sources being used throughout this research work are based on monographs of classic authors in the respective theoretical fields, such as Luhmann, Penrose, Weinert and Deming. Further to this the research work accesses papers of main authors traced back to 1965. The main journals used were Management Science, Strategic Management Journal, Academy of Management Review, and Journal of Operations Management. With regard to conceptualization of the research study papers and contemporary publications as well as special-issues have been used. This contributed to clarification of the research question, the respective hypothesis and the related model. Here the author refers to publications up to 2014. Further to this and in the framework of the pilot study managers from medium sized companies and institutes were interviewed. Additionally a group of experts in the field of business excellence was included in this step. In order to develop and consolidate the operationalization of the model, questions were traced back to research papers in place applying a cross-sectional view on the respective conception as well as previously established studies of research institutes which have been included. The first step of the empirical study, being based on interviews with company managers allowed a qualitative pre-selection of company cases. Further to this the main empirical study, being based on medium-sized manufacturing company cases, incorporated a community of 206 employees in total being approached through quantitative questionnaires. Finally further experts were involved to challenge the results and conclusions.

Approbations of Research Results

The respective results have been presented at conferences and published in different publications throughout the progress of the work.

International Conferences

- **Bolzern-Konrad, Britta:** 'Matching industry requirements with the technical and social skill set of job entrants to ensure long term retention', *International Conference in Global Business Management Research* - 'Recent Developments in Business Management Research', University of Applied Sciences Fulda, **Germany, December, 2-4th, 2011.**
- **Bolzern-Konrad, Britta:** 'Organizational commitment in the prism of long-term retention', *International Conference for Business and Economics* – 'Innovative Approaches of Management

Research for Regional and Global Business Development', University of Applied Sciences Kufstein – Business School GmbH, **Austria, August, 3-5th, 2012.**

- **Bolzern-Konrad, Britta; Egger, Carolin:** 'Hospitality as an organizational value impacting customer satisfaction', *International Conference of 15th Faculty & Real Estate Management Congress – Hotel & Leisure facilities*. University of Applied Sciences Kufstein, **Austria, February 6th-8th, 2013.**

- **Bolzern-Konrad, Britta:** 'Company competencies and industrial competencies in the prism of social capital', *International Scientific Conference* – 'New Challenges of Economic and Business Development 2013', University of Latvia, **Riga, May 9th-11th, 2013.**

- **Bolzern-Konrad, Britta:** 'The role of trust building in strategic management', *International Business Conference* – 'Current Approaches of Modern Management and Strategy Research'. University of Applied Sciences Kufstein**, Austria, November 29th-30st, 2013.**

- **Bolzern-Konrad, Britta:** 'Trust and employee competence utilization in a business excellence environment – Operationalization of a model', *International Conference on Advance Research in Engineering & Technology* 2014. ICARET14, ARM College, **India-Chennai, 18th – 19th April, 2014.**

- **Bolzern-Konrad, Britta; Egger, Carolin:** -'Trust as an enduring organizational value for competitive advantage in a constantly changing business world: theoretical and empirical findings from two research studies', *14th Biennial Conference 2014* for the *International Society for the Study of Value in Shock* 'The Role of Contrasting Management, Economic and Religious Paradigms in the Workplace', hosted by University of Latvia, Faculty of Economics and Business Administration, **Latvia-Riga, 29th June-2nd July, 2014.**

- **Bolzern-Konrad, Britta:** 'Trust and employee competence utilization - Empirical testing of a model' , 'ECKM 2014 – *European Conference on Knowledge Management. Polytechnic Institute of Santarem*, Portugal **Portugal-Santarem, 4-5 September 2014.**

- **Bolzern-Konrad, B, 2015:** 'A new integrative model on trust in organizations – a quantitative approach for application in strategic management', *12th International Conference on Intellectual Capital, Knowledge Management and Organizational Learning***, University of Bangkok, Bangkok, Nov 5th/6th 2015.**

National Conferences

- **Bolzern-Konrad, Britta:** 'Empirical Study with Business Excellence Experts', TPM Forum 2014 'Total Productive Management', Cologne, **Germany, March 25th/26th 2014.**

- **Bolzern-Konrad, Britta:** 'The competence balance'- A question of trust building / Die Kompetenzbalance – Eine Frage von Vertrauen', **VDI Congress:** Kongress der Frauen im Ingenieurberuf, Nürnberg, **Germany, July 18th 2014.**

- **Bolzern-Konrad, Britta:** 'Trust as a catalyzer for employee competence utilization – a fundament in business excellence?', TPM Forum 2015 ,Total Productive Management', Munich, **Germany, March 24th/25th 2015.**

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- **Bolzern-Konrad, B**, **2015,** 'A new integrative model on trust in organizations – a quantitative approach for application in strategic management', *The proceedings of the 12th International Conference on Intellectual Capital, Knowledge Management and Organizational Learning*, Edited by Dr Vincent Ribiere, Published by ACPIL, ISBN: 978-910810-74-3, p. 347-354
- **Bolzern-Konrad, B, Neuert, J, Woschank, M**., **2015**, ‚The impact of social capital on employee competence utilization in organizations - Socio-cultural modelling and testing', *Contemporary Approaches of international Business Management*, Economics and Social Research, Vol. 3.

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1 ALLOCATION OF THE RESEARCH'S ELEMENTS 'TRUST AND EMPLOYEE COMPETENCE UTILIZATION' WITHIN THE INVOLVED THEORIES AND THE PRISM OF ORGANIZATIONS

The aspect of trust and its impact on employee competence utilization embeds the research question within the frame of organizations. The view of the different elements of organizations is related to certain aspects of the phenomenon under study and has impact on the focus and relation to the respective organizational theory. For this research management is seen to take the lead in choice making. Beyond this the research work is strongly linked to the human resources approach. Strategic management is undergoing tremendous change and with this respective management philosophy also varies. In addition business excellence and its corresponding approaches are involved here and show various linking points, including strategy and human relations. Strategic management deals in its core with the question of how differences in the success of organizations can be explained. Sustained competitive advantage in turn is strongly determined by the internal resources of a firm. Both the resource of 'trust' and the resource of 'competencies', are intangible personal resources with a particular character. Trust is seen as an element of social capital in this research work. In order to approach the aspect of competence utilization, the concept of competencies itself has to be first understood. Especially the element of 'willingness' builds the core for the utilization of employee competencies in this research. Following this chain of thought the presentation of the state of the art ideas in the field of organizational theory, business excellence, trust within the theory of social capital and competencies is given. Based on the background of conceptions, different opinions of various authors are worked out illuminating the changes in conditions as well as the development of new approaches. This approach is taken in order to establish a basis for the identification of the problem in chapter 2.

1.1 THE APPROACH TO ORGANIZATIONS AND THEIR CHARACTERISTICS DEVELOPED TOWARDS THE STRATEGIC RELEVANCE OF HUMAN RESSOURCES

People are confronted with organizations every day in private and business life. They experience organizations as systems of implicit and explicit rules directed at a specific goal. These systems communicate expectations towards members and non-members of organizations that relate to their behavior. Rules coordinate activities that are needed for the fulfillment of those

goals. This is because single individuals would not be able to achieve the goals based on their own exclusive effort. It is also, because the complexity of the economy and division of labor makes people dependent on the coordination of activities. Consequently Scherer states that an organization is a prominent instrument in managing this coordination and of combining activities to form an acceptable overall concept. [9] Scott and Davis further underline the social significance of organizations.[10] Describing organizations as a complex set of social processes, behaviors, routines and structures, they explain, that all organizations must define and adapt their objectives and induce participants to contribute services. This is because it is the individual that creates social structures in order to support the collaborative pursuit of specific goals. Like Scherer they also point out that these contributions have to be controlled and coordinated through organizations. Organizations must find ways of combining and harmonizing features associated with the work flow and associated with human or social behavior. Therefore 'understanding what organizations are' is also about understanding and learning how to predict and control complex and enigmatic organizational behavior.' [11] In order to indicate which factors are critical or important and how they are related, Nadler and Tushman developed a tool that they called 'the Conceptual Framework Model'. The following picture embeds their framework into the logic of the theoretical approach of the research study.

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[9] Kieser (2006), p. 19
[10] Scott & Davis (2007), p. 7
[11] Scott & Davis (2007), p. 11 work flow (technologies, equipment, skills, know-how, communication of task information) and human or social behavior (motivation , dealing with different interests, authority and status matters, equity and distribution matters)
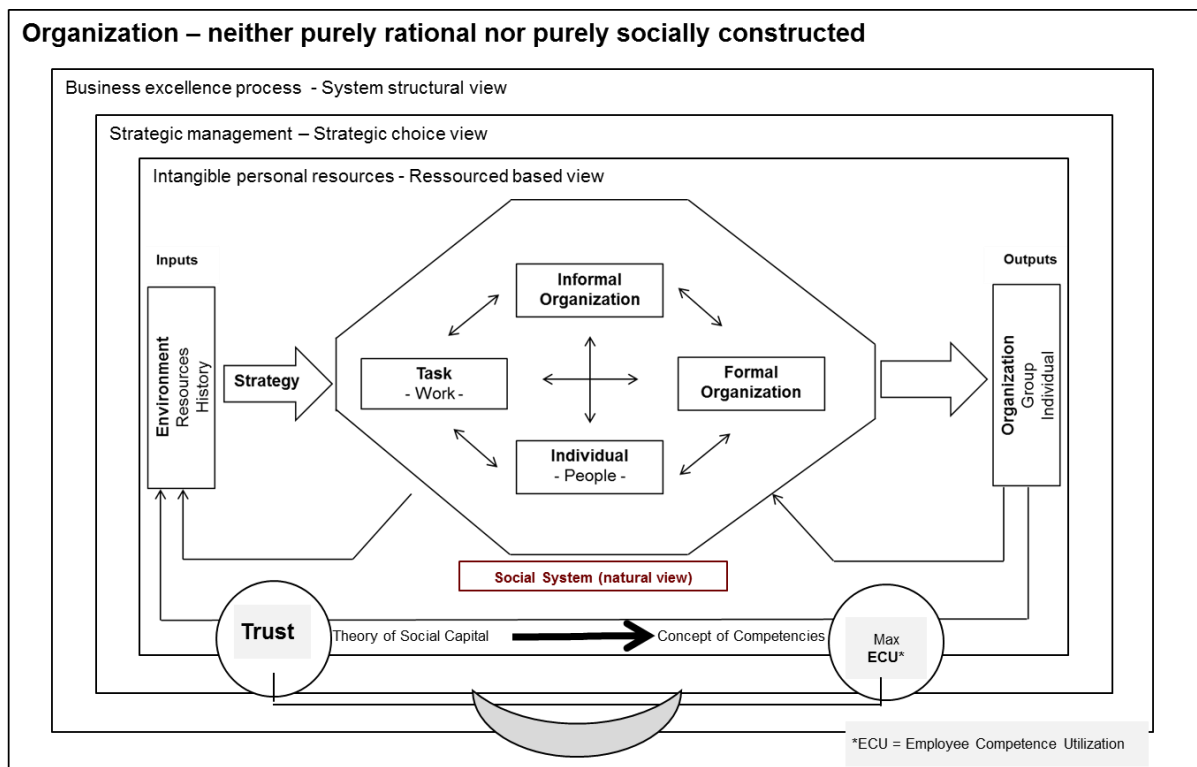
Figure 1. 1 Research context

Source: Author's model based on the conceptual framework model of Nadler and Tushman[12]

Nadler and Tushman describe the essential elements of an organization as; task, individual, informal organization and formal organization. The task includes the basic and inherent work to be done by the organization and its parts. The formal organization reflects on structures, processes, methods, and others that are formally created to get individuals to perform tasks, such as organization's design and work environment. The individual symbolizes the characteristics of individuals in the organization including knowledge, skills, preferences, perceptions, background factors.[13] Here Scott and Davis add that in return for a variety of inducements, organizational participants are important contributors to the organization. With this they also attach importance to the fact that the extent and extensiveness of people's involvement may vary greatly. Characteristics of the individual being relevant besides others are knowledge and skills and how they relate to the task they perform and the people's needs and preferences.[14] The informal organization covers emerging arrangements, including structures, processes and relationships.

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[12] Nadler, David, A & Tushman (1980), p. 35 Nadler and Tushman have based their model on an open systems approach as they view the organization as one that interacts with it environment. Given an environment a Strategy needs to be defined and implemented to produce effective performance. After that the organization and its major components are the fundamental means for transforming energy and information from inputs into outputs.
[13] Nadler, David, A & Tushman (1980), p. 40
[14] Scott & Davis (2007), p. 24, here they refer also to (Barnard (1938) and Simon (1997)

This includes behavior of leaders, groups, informal working arrangements and communication and influence patterns.[15] Like Nadler and Tushman, Scott and Davis also see the informal organization as being decisive in the way the organization operates. This includes the organization's culture, norms, and values, social networks both inside and outside the organization, power and politics and the actions of leaders. Similar to Nadler and Tushman they state that an organization's work gets done by people, individually or collectively, on their own or in collaboration with technology. Also leaders and their actions, their strategies and structures have an important influence on organizations.[16] The conceptual framework model thus shows the importance of strategy and opens the perspective on the individual's characteristics and perceptions that are part of the informal organization and its social networks; a perspective the research paper at hand focusses on.

This focus also defines the view of the different elements and the relation to the respective organizational theory. In their book, Organizations and Organizing, Scott and Davis describe three general perspectives of organizations. The perspectives are based on differing ontological conceptions which guide and influence the ways we think about organizations and organizing. Accordingly they come up with three different definitions of organizations.[17] The rational definition describes organizations as highly formalized collectivities oriented to the pursuit of specific goals within a relatively stable environment. The focus is on formal organizations and the characteristics of structure. As stated by Steinman and Schreyögg, informal organizations show us human beings and their behavior in organizations, which was not the focus of the classical approach.[18] With the research at hand being directed at the informal organization and the individuals involved, the natural perspective comes into the picture. This perspective describes organizations as social systems, forged by consensus or conflict. The focus is on informal and behavioral structures. Natural system theorists expand the definition of organizationally relevant behavior in order to include a broader range of an individual's activities and attitudes, just as rational system theorists did. Essentially the natural systems were shaped by the human resource and motivation related approaches. Studies on human behavior such as the Hawthorne studies noticed that emotions are essential to productivity and that the human factor is important. At the

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[15] Nadler, David, A & Tushman (1980), p. 40
[16] Scott & Davis (2007), p. 24
[17] Scott & Davis (2007), p. 34
[18] Steinmann & Schreyögg (2005), p. 56 The rational systems definition is very much shaped by Taylor and his Scientific Management, Weber (1968) and his Theory of Bureaucracy, Fayol (1919) with the Administrative Approach and Simon's (1997) Theory of Decision Making.

social psychological level, the Hawthorne studies pointed to a more complex model of worker motivation based on a social psychology rather than on an economic conception of man. On the structural level, the studies discovered and demonstrated the importance of informal organizations.[19] Related to this idea Miles and Snow point out that the human relations model accepted the universality of social needs for belonging and recognition. Further to this the human resource model viewed the manager's role as that of a facilitator motivating employees to search for ways to contribute meaningfully in their work roles.[20] Steinmann and Schreyögg note critically here, that the focus on organizational behavior had led to the disregard of structural aspects of the rational theory. As a consequence proposals for solutions to the stress ratio between discipline and autonomy have been developed. Theories that combine individual needs and economic targets are McGregor's, 'the human side of the enterprise', Maslow's, 'the pyramid of needs' and Herzberg's, 'the two factor theory'.[21] Those are aspects that are touched on later in the research study, when it comes to the conceptualization of employee competence utilization. The open definition depicts organizations as systems which have to adapt to environmental changes.[22] They do this by gearing their structured processes, in which individuals interact, with the needs of the environment.[23] Based on Bertalanffy, who is seen to be the founder of the open systems approach, all disciplines can be subsumed under the general rubric of systems. Perspectives differ from self-regulation programs [24], such as weekly connected elements contributing to routinized problem solving programs aimed at a level of workable certainty[25]. In his typology Boulding illuminates different levels of systems. The lower levels encompass the physical systems; the medium levels cover the biological systems, whereas the high levels refer

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[19] Scott & Davis (2007), p. 6, the natural systems definition is very much shaped by Barnard's conception of cooperative systems and Selznik's institutional approach in 1949. The first emphasis on human behavior was done in the framework of the Hawthorne studies of Roethlisberger and Dickson in 1939, which was picked out as a central theme by Mayo's human relations school in 1945. Participation and recognition were realized as being important for motivation as they create a feeling of being pride to be part of the organization. Additional studies were carried out by the Harvard group with the outcome that individual workers do not behave as 'rational' economic actors, but as complex beings with multiple motives and values. They are driven as much by feelings and sentiments as by facts and interests. They do not behave as individual, isolated actors, but as members of social groups exhibiting commitments and loyalties to colleagues stronger than their individualistic self-interest.

[20] Miles et al. (1978), p.558-559

[21] Steinmann & Schreyögg (2005), p. 65, see also Mc Gregor (2006) 'The human side of enterprise', Herzberg (1993) 'The motivation to work', Maslow (1981) 'Motivation und Persönlichkeit'

[22] Steinmann & Schreyögg (2005), p.33-71, explanations on Organizational Theory Development refer to this source

[23] Scott & Davis (2007), p. 11-106, explanations on Organizational Theory Development refer to this source

[24] Steinmann & Schreyögg (2005), p. 69, here he refers to Bertalanffy (1956), Beniger (1986)

[25] Scott & Davis (2007), p. 105, referring to Weick (1979), p.215. Although the objective of the entire process is to reduce equivocality, some ambiguity does and must remain if the organization is to be able to survive into a new and different future. In other words;' organizations continue to exist only if they maintain a balance between flexibility and stability', see also Mandl (2000), 'Kluft zwischen Wissen und Handeln', Lutz von Rosenstiel.

to the human and social systems.[26] The aspect of higher level systems also touches on the perspective of the research study. The systems theory approach especially influenced the road towards recent attempts in business excellence. Those especially included ideas on open and close systems, synergy, and subsystem interdependences.[27]

Reflecting on the long history of organizational theory and ongoing further developments it becomes obvious that definitions are neither true nor false but are only more or less helpful in drawing attention to certain aspects of the phenomenon under study. Also Scott and Davis underline this perception in saying that the three perspectives are partially conflicting, partially overlapping and partially complementary each other. Though the placement of the study within the business excellence environment allows a link to be made with the rational systems approach, the emphasis is on the human being as the central element. Management of organizational behavior is central, behavioral aspects are the core.[28] Therefore considering the three basic schools, the natural systems view dominates the research paper study. With this it is strongly linked to the human resources approach.[29]

Due to globalization, technological developments, interacting cultures, growing complexity and uncertainty, to name but a few, perspectives on organizations are continuously developing; as are organizational theories. In order to simplify theories and attempt to integrate views Lawrence and Lorsch developed their Contingency Model. In their proposals they reconciled the rational and natural systems perspective on the open systems background. In essence they argue, that if the open system perspective is taken, either the rational or natural perspective has to be chosen depending on the environment the organizations find themselves in. In simplified terms, the classical systems theory tends to predominate in more stable environments, while the human

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[26] Boulding (1956), p. 200-207 in Scott 2007, p. 89
[27] Daft (2010), p. 47 *The open system must interact with the environment to survive, synergetic effects make the whole greater than the sum of its parts, subsystems depend on one another as parts of the system.*
[28] Nadler, David, A & Tushman (1980), p. 35, This is the reason, that – a task that involves the capacity to understand the behavior patterns of individuals, groups, and organizations, to predict what behavioral responses will be elicited by various managerial actions., and finally to use this understanding and these predictions to achieve control.
[29] Miles et al. (1978) p.558-559, as Miles et al explain: The traditional model states that the capability for effective decision making was narrowly distributed in organizations. A selected group of owner managers was legitimized and able to direct large numbers of employees by carefully standardizing and routinizing their work and placing the planning function solely in the hands of top managers. The human relations model accepted the superior decision-making competence with its narrowly distribution among the employees but emphasized the universality of social needs for belonging and recognition. Organizational performance was linked to the member's feelings of involvement and importance. Human resources model views the manager's role as that of a facilitator motivating employees to search for ways to contribute meaningfully in their work roles. The model emphasizes variations in member capacity and motivation.

relations theory is more appropriate to dynamic situations'.[30] This argumentation respects the fact that organizations cannot be seen isolated from their environment - a perspective which is also very valid in strategic thinking. Thompson also created an approach to reconcile all perspectives. In his work 'Organizations in Action' he proposes that each of the three perspectives is applicable to a different level of organizations. Thompson argues that on the technical level the rational system perspective may be applied in order to protect the organization from external uncertainties to the greatest extent possible. In contrast on the institutional level the organization must be open to environmental influence. On the managerial level, sandwiched between the lower and the upper level, more flexibility is required, leading to less formalization and behavioral aspects, depicted by the natural theory.[31] In addition, reflecting the complexity of organizations, theorist Astley and Van de Ven discuss four basic views that are based on two analytical dimensions: the level of organizational analyzes (macro or micro) and the relative emphasis placed on deterministic versus voluntaristic assumptions about human nature. Depending on the direction of the respective theory they differentiate between micro, meso or macro perspectives. The micro perspective refers to the behavior of individuals within one organization. The meso view reflects the behavior of an organization unit as a whole and the macro angle touches on relationships between different organizations. With the topic of the research study the chosen level of analysis is directed at the intra-organizational perspective and so is focused on the micro level. However, also meso elements are touched on within this research, especially at the institutional level. This is because relationships between individuals should always be seen interdependent to groups, and organizations, irrelevant of whether this involves action in the pursuit of collective or individual ends.[32] Referring to the concept of Atlsey and van de Ven the intra-organizational perspective opens the view on the system-structural and the strategic choice view. Based on a deterministic assumption the basic idea of the system structural view focuses on the idea that the managers' basic role is a product of exogenous shifts in the environment to which they can react through re-arranging internal organizational structure. The strategic choice view in contrast advocates a voluntaristic orientation. Within this view organizations are seen to be continuously reconstructed, sustained and changed by the actors that define the situation. The strategic choice view draws attention to individuals, their interaction, social constructions, autonomy, and choices. Managers perform in a proactive role shaping the

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[30] Lawrence & Lorsch (©1986), p. 183
[31] Thompson (2003), p. 10
[32] Astley & van de Ven (1983), p. 251, p. 266-268

organizational world.[33] With the topic of the research study, allocated within an organization as well as being positioned within the strategic management field, the strategic choice view must be seen to hold a prominent position. This certainly does not mean that management is completely free in its decisions. The manager must also perceive, process, and respond to a changing environment and consequently adapt by re-arranging internal organizational structure to ensure survival and effectiveness.[34] The interplay between a voluntaristic decision and given frameworks is also the approach followed in the adaptive cycle framework of Miles and Snow. They reflect on the numerous choices managers make as three underlying domains: the entrepreneurial, the engineering and the administrative. All domains are described in the adaptive cycle which is consistent with the strategic choice approach.[35] The entrepreneurial domain concerns the firm's markets and the managements' definition and acceptance of an organizational domain, entailing commitment to resources to achieve objectives relative to that domain. The engineering domain involves the creation of a system which implements management solution to the entrepreneurial problem and includes the selection of appropriate technology. The administrative domain is intended to reduce uncertainty within the organizational system. This is done by rationalizing and stabilizing those activities which have successfully solved problems and formulating and implementing processes which will enable the continuing evolution of the organization (innovation). This process is typically shown in the PDCA and SDCA cycle of total productive management systems (TPM)[36] in order to facilitate rational decision making within complex organizational systems[37]. In this respect and referring to the embedding of the research study within the business excellence framework, a link to the system structural view is allowed. Astley and Van de Ven similarly broach the issue that interplay of structural forms and personal action is necessary. They believe that both structure forms and personal action are central to organization and management theory. With this they state, that organizations are neither purely objective nor purely subjective phenomena. They are objective systems in so far as they exhibit

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[33] Astley & van de Ven (1983), p. 249-250 Differentiated from these two perspectives the natural selection view and the collective action view are both placed on the macro level related to populations and communities of organizations. In contract and positioned on the macro level, the natural selection view believes that the evolution of corporate society is driven by environmental forces. The collective-action view, also positioned on the macro level is driven by communities of networks achieving collective survival through the construction of a regulated and controlled social environment mediating the effects of the natural environment.

[34] Astley & van de Ven (1983), p. 248

[35] Miles et al. (1978), p. 548

[36] Austenfeld (2001), p. 58-59, PDCA / SDCA=Plan Do Check Act / Stabilize Do Check Act

[37] Scott & Davis (2007), p. 38 Highly technical managerial systems are designed to provide greater visibility and greater accountability for the critical work flows with the intention to facilitate rational decision making within complex organizational systems. (MBO, PPBS, PERT, ISO 9000

structures that are only partially modifiable through personal action, but are similarly subjective in so far as these structures are populated by individuals who act on the basis of their own perceptions and act in both unpredictable and predictable ways.[38] Rules must be obeyed so that collective association can continue. Within the rules several different strategies are possible. Players remain free but must adopt a strategy of approximate conformance to the rules. As a consequence operation strategy decisions are strongly linked to manager beliefs but also depend on the power of organizational behavior. Management responds to contextual constraints in a technically appropriate manner but also has the leeway to create and define the organization's context. In line with the strategy definition, managers are seen to pro-actively select what they predict will be important and what will be the relevant operating context for their organization.[39] Reflecting on the combination of functional determinism and individual action, a balanced management approach seems to be necessary.

With management being seen as of central importance, the purpose of strategic action comes into focus. At its core strategic management deals with the question how differences in the success of different organizations can be explained. Rumelt formulates the question, 'What sustains the heterogeneity in resources and performance among close competitors?'[40] Scott and Davis come to the point, 'Why do some organizations perform better than others?'*[41] Hungenberg underlines that all different approaches and perspectives act on a common basic understanding that strategy is related to decisions determining the general direction of the company development. This is done with the target of long lasting success through the definition of the internal and external direction of the company.[42] Miles and Snow add that, any typology is unlikely to encompass every form of organizational behavior. This is because the world of organizations is much too changeable and complex to permit such a claim.[43] Based on the fact that strategic management incorporates decision making processes that are strongly linked to behavior, two contrasting lines of logic have to be differentiated. On the on hand strategy interpretation is linked to the decision theory seeing the strategy process as a rational planning process. On the other hand strategy interpretation is linked to behavioral research approaches related to limited rationality.[44] The rational decision making party declares that strategic

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[38] Astley & van de Ven (1983), p. 266-268
[39] Astley & van de Ven (1983), p. 252, 253
[40] Rumelt, Schendel & Teece (1994), p. 43
[41] Scott & Davis (2007), p. 310
[42] Hungenberg (2012), p. 4
[43] Miles et al. (1978), p.550
[44] Hungenberg (2012), p. 321

management takes decisions on strategies, structures and systems. These decisions define the direction of the company and form the basis for instruments that direct resources in the intended direction. Strategies give direction and systems and structures are intended to coordinate action to be in line with the Strategy. [45] This connection is also expressed by Chandler, *'structure follows strategy'*.[46] The description of the decision making process in a phases model includes strategic analysis, strategic formulation and selection as well as strategic implementation. [47] To be successful in implementing strategies top management must clearly articulate the organization's strategy, must fully shape the organization's structure and process to fit a chosen strategy and must adapt the organization's current strategy structure relationship along with changes in environmental conditions.[48] But the strategic challenge is the need to continuously adapted to both, external environmental conditions and internal factors. Therefore the strict chronology of a rational strategy process is not implementable under all circumstances. This is why also other interpretations are in place that arrives at varying descriptions of the strategic process. [49] The role of behavior should now be mentioned, considering the organization to be a coalition of stakeholders with multiple targets and limited rationality.[50] In his reflection on the strategy process Mintzberg combines both perspectives and sees strategies as a 'deliberate process of conscious thought', neither formally analytically nor informally intuitive. [51] Mintzberg differentiates in his survey between 10 different schools, and promotes a kind of across schools approach seeing the nature of strategy in the process itself, which can tilt towards the attributes of one or the other school.[52] He supports a continuous balanced view of the rational and intuitive elements of strategy in order to cope with environmental demands. He also underlines the importance of both the judgmental design combined with intuitive visioning and emergent learning. Mintzberg further accentuates that individual cognition and social interaction (both cooperative and conflicting) are necessary in terms of a holistic view on strategy. [53]

With respect to the research study this perspective opens the view on informal personal resources of a company. Historically the explanatory cause of competitive advantage was seen to lay in the market's structure and the positon of the organization in the market pattern, whereas the

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[45] Hungenberg (2012), p. 9
[46] Chandler (1962), in Hungenberg (2012) p. 334
[47] Hungenberg (2012), p. 12
[48] Miles et al. (1978), p.557-558
[49] Hungenberg (2012), p. 12
[50] Hungenberg (2012), p. 321
[51] Mintzberg & Lampel (1999), p. 22
[52] Mintzberg & Lampel (1999), p. 26, 27
[53] Mintzberg & Lampel (1999), p. 27

resourced based view can be found in the foreground today. [54] As a consequence strategy is not purely about the choice of action. Sustained competitive advantage is also strongly determined by the internal resources of a firm. The resources must have several qualities, they must add value, they should be unique or rare, difficult to imitate and non-substitutable.'[55] On this basis it is of interest how resources are thematically captured within this research. Firstly, the definition of resources is not consistent in literature. Referring to Eberl the general understanding is that resources are factors that belong to the steering domain of the company and have impact on added value.[56] As Barney emphasizes, these factors are, 'all of the financial, physical, human, and organizational assets used by a firm to develop, manufacture and deliver products and services to its customer.'[57] Moldaschl also uses a very general definition in saying, that resources are 'enabling condition for action in the present or future.'[58] Basically resources can be distinguished in tangible and intangible resources. Individual competencies and social capital are part of the personal intangible resources. These company internal resources are strategic resources if they lead to sustainable competitive advantage. Barney defines strategic resources as fulfilling the following criteria; value, rarity, inimitability, substitutability. A resource, having the potential for competitive advantage, must be valuable in the sense, that it exploits opportunities and / or neutralizes threats in a firm's environment. It must be rare among a firm's current and potential competition. It must be difficult to imitate either through unique historical conditions, causal ambiguity, or social complexity. Finally it must be without strategically equivalent substitutes[59]. Based on this definition Barney comes to the conclusion that especially personal intangible resources are considered to be more durable and less susceptible to limitations than other types of assets'[60] Also Storey underlines this perspective in saying that the human factor is seen as one which really makes the difference [61] and that it is human capability and commitment that distinguishes successful organizations from the rest'[62] Both, trust and competencies, are positioned here. Particularly with respect to the concept of competencies it is necessary to

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[54] Storey (1995), p. 4
[55] Storey (1995), p. 4
[56] Eberl (2009), p. 51
[57] Barney (1995), p. 50
[58] Müller & Kaegi (2011), article of Moldaschl 2002, p. 56
[59] Barney (1991), p. 105 Tangible resources are physically and impersonal integrated in the organization, like properties, buildings, machines and technologies. Intangible resources cannot be measured directly but are important for the performance process of the company. They can be impersonal like contracts, patents, licenses and personal like knowledge, intelligence, experience, individual competencies or individual social capital.
[60] Barney (1991), p. 110
[61] Storey (1995), p. 4
[62] Storey (2007), p. 9, remark from the author: which is explicitly valid in times of skilled worker shortage.

understand the difference or the relation between resources and competencies. The approach of Grant and Penrose helps to clarify this. They illuminate that resources are the source of a firm's capabilities and capabilities are the main source of competitive advantage.[63] This perspective is also underlined by Edith Penrose. She gives insight that not the resources themselves, but the quality and the application of resources, influence success, As a result the usage and combination of resources defines the distinct structure or character of a firm. With this she puts the focus on the services in terms of performed action. To explain, she underlines that the pure existence of resources is not seen to be sufficient. Different purposes, different methods of usage, different combinations or amounts of resources lead to different services. Based on the creativity and vision of management resources may or may not be utilized. The creative effort, the sense of timing, the instinctive recognition of what will catch on or how to make it catch on, is of overwhelming importance. Here again the importance of strategic management comes into the picture. The availability of resources being one aspect, the way of utilizing those resources generates a company's specific profile. Here again resource contribute to competitive advantage.[64]

With respect to the topic of the research study, both trust and competencies are intangible personal resources with a particular character, being reflected throughout the following paragraphs. To summarize, with the topic of the research study, being allocated within an organization as well-being positioned within the strategic management field, the strategic-choice-view has been seen to be at the prominent position. Aware that organizations are always part of the wider environment the focus of this research is made on the active, constructive perspective, being related to the voluntaristic idea. Management is seen to take the leading role in choice making regard to its positioning within the wider environment. Nevertheless organizations are neither purely rational nor purely socially constructed. This is of importance as the research work is described by internal social forces and organizational behavior concerned with individuals. As a result and reflecting the three basic schools the natural systems view is dominant for the research paper at hand. With this it is strongly linked to the human resources approach and its need to be attentive towards utilization and sustainability of its respective resources in order to achieve a competitive advantage. Reflecting on the combination of functional determinism and individual action, a balanced approach to management seems to be necessary.

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[63] Grant (1991), p. 119, they use capabilities and competencies in the same meaning
[64] Penrose (2009), p. 22,32,33

Strategic management is undergoing tremendous changes and with this the respective management philosophy. Quality management and its corresponding approaches are involved here and show various linking points; including strategy and human relations.

1.2 HIGHLIGHTENING THE CONCEPT OF BUSINESS EXCELLENCE IN ITS DEVELOPMENT STAGES AND PERSPECTIVES IN ORDER TO DEFINE THE CHOSEN PROJECTION

'Respect for people and constant challenging to do better – are these contradictory? Respect for people means respect for mind and capability. You do not expect them to waste their time. You respect the capability of the people. Americans think, teamwork is about liking me and liking you. Mutual respect and trust means I trust and respect that you will do your job so that we are successful as a company. It does not mean we just love each other.''[65]

Targeted at fulfilling the requirements of powerful customers as well as being motivated to achieve unique performance targets and sustainable success, companies strive for business excellence systems. With a variety of philosophies in place and the intention to filter out elements that are essential for the research topic, it is necessary to illuminate different roots and analyze their differences and communalities. The wording chosen for the umbrella perspective on quality management in the research at hand is, 'business excellence'. This choice has been made with the strategic management framework in mind, taking expert opinion into account and looking for proximity to the European excellence notion.

1.2.1 EVALUATING DEVELOPMENT STAGES AND PERSPECTIVES ON BUSINESS EXCELLENCE

Business excellence approaches have been developing along with the different development stages of organizational theory that influence companies today. The very first development of thought towards the current business excellence practices can be seen in Taylor's Scientific Management system theory (1911). His highly pragmatic approach attempted to increase productivity by breaking down complex processes into specialized parts separating planning and doing. Also Fayol (1919) constituted the theory of management with his so called 'best practices' a phrase very often used in today's business excellence field. Subsequent to the classical approaches the humanistic perspective gave the first overlap in terms of general

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[65] Liker (2004), p. 184 Stated by SAM Heltman, Senior Vice President of Administration, Toyota Motor Manufacturing North America (one of the first five Americans hired by Toyota, Georgetown)

philosophy. The basic setting of , positioning truly effective control directly with the individual worker, and the idea of, the importance of enlightened treatment, allowed workers to use their full potential and included aspects of human behavior and interaction into the organizational setting. Those settings can be seen as approaches that smoothed the way towards later attempts in business excellence.[66] Approaches to link job design to motivation theories and the imagination and intellect of employees, affected by Maslow (1908-1979) and McGregor (1906-1964) were also appreciated in the course of enhancements in business excellence philosophy. Those developments took place based on the belief that employees exercise self-control and contribute to the organizational goals when given the opportunity.[67] Developments in business excellence are thus very close to the corresponding (ontological) perspective chosen for this research work.

Although business excellence in general is still in the early stages of theory development it is tending to become established as an independent discipline. As Dale writes in his article on quality management, it changes from being viewed as part of operations management to an academic subject in its own right. He emphasizes that the works of international quality management experts such as Crosby, Deming, Feigenbaum and Juran have provided the baseline for the advancement of theory through areas such as management by fact, customer focus, process orientation and teamwork.[68] However, when it comes to examining specific programs in place today tracing back the history of developments is difficult.[69] This is due to fragmented documentation, development roots spread over different continents, and differences in philosophies. Nevertheless different roots have been affecting each other ongoingly throughout the past decades although developed in different places. Independent from the very first approaches it can be stated that one of the most important 'fathers' in the field was Peter Drucker. He had great impact on the development of upcoming quality management theory.[70] Drucker's work was directed towards the fundamental tasks of management. Those tasks included making people capable of joint performance through common goals and values, creating an appropriate

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[66] Daft (2010), p. 41-45 Holweg makes clear that the whole concepts is an adaption of various elements of different industries from different continents not formally documented before 1965

[67] Daft (2010), p. 45

[68] Dale et al. (2001), p. 439

[69] Holweg (2007), p. 422 Holweg suggests defining the starting point for the development of different philosophies in 1918 when the entrepreneur Sakichi Toyoda established his spinning and weaving business based on his advanced automatic loom. Following to this, the first crucial impulse in the development of the Toyota production system was made by Taiichi Ohno in 1932. Interestingly he was influenced by Focke-Wulff aircraft in Germany, developing the so called 'Takt-Time', and later by Ford's experience of its inability to accommodate consumer preferences for product diversity. Nevertheless Holweg makes clear that the whole concepts is an adaption of various elements of different industries from different continents not formally documented before 1965

[70] Daft (2010), p. 46

organizational structure and motivating employees to perform and to respond to change.[71] These management principles set the basis for all quality management approaches today. Taking an overall view of management he included market standing, innovation, productivity, personnel development, quality, and financial results as being crucial to the organization's performance and to its survival. By emphasizing the central importance of personnel he states although profit is crucial success lies in the employees' commitment to a meaningful contribution to the company's goals. Therefore he strengthens the importance of the company mission. On one hand meaningful achievements motivate employees to realize their potential and are rewarded with satisfaction that this brings. On the other hand responsibility plays a key role in focusing on group performance and with this turning attention to the colleagues, the organization as a whole and building up teamwork.[72] As Drucker points out, the key question should be: 'what can I contribute that will significantly affect the performance and the results of the intuition I serve?[73] Another 'father of the quality movement' was Deming. When Deming started to develop his ideas, common sense was that either quality or productivity could be high. His intention, in contrast, was to show that a stable system allows and requires continuous improvement of quality.[74] Deming established 14 principles for management including a clear direction and philosophy of management as well as employee related tasks like continuous improvement, training on the job and teamwork, to name but a few. By putting the employee at the center of his philosophy he illuminated the importance of a fearless culture. 'Drive out fear' was part of his program for education and self-improvement. It was based on the idea that no one can give his best performance unless he feels secure in expressing his ideas and is free to ask questions.[75] Deming initially developed these ideas in 1982, but before they were accepted and implemented by the U.S. market and U.S. managers, the Japanese embraced his theories and modified them to

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[71] Drucker (2001), p. 4'The future of Industrial Man' (1942) and ending with 'Management Challenges for the 21st Century' (1999); in 2001 a summary of essentials was available 'The Essential'

[72] Drucker (2001), p. 40, 46 Reflecting on volunteers he tries to explain the effect: 'Volunteers must get far greater satisfaction from their accomplishment and make greater contribution precisely because they do not get money.'

[73] Drucker (2001), p. 207, p. 214 remark from the author: at this point it has to be mentioned that especially the impact factors for competence utilization touch on the desire for contribution, as it is part of the willingness element. This aspect and the special impact of trust on this will be analyzed in detail throughout the research work. -> the own demand on professionalism

[74] Deming (©1986), p 1

[75] Deming (©1986), p. 23,59,60,61 Deming gives some examples. Fear leads may lead to impaired figures and padded figures and with this hurt the organization. Pride or insecurity might be part in resistance to knowledge. Expressions like the following might picture different sorts of fear: I could do my job better, if I understood what happens next. If I did my best for the company, long term, I'd have to shut down production for a while for repairs and overhaul. I am afraid that I may not always have an answer when my boss asks something. I am afraid to admit a mistake. The system I work in will not permit me to expand my ability. We mistrust Management. We can't believe their answers when we ask why we do it this way. The Management has a reason, but telling something else.

help rebuild their industries into world powers. Based on their previous ideas Japanese companies implemented the 'Deming-System' and shifted gradually from an inspection-orientated approach to quality control, toward the prevention of quality problems through employee involvement. The inventor of the system in Japan was Taiichi Ohno of Toyota Motors Company. The system was in particular directed at the Toyota product development process and was therefore being called 'The Toyota Production System', in short TPS.[76] Asked about the uniqueness of the quality approach the president of Toyota Motor Company, Fujio Cho underlined the systems approach behind it. In his book, 'The Toyota Way', Likert describes that the success of Toyota derives from balancing the role of people in an organizational culture that expects and values their continuous improvements, with a technical system focused on a high–value-added flow.[77] Building on Deming's ideas the TP-System is based on 14 principles, including the fundamental ideas of Maslow and Herzberg. As Likert writes, 'in the end, building exceptional people and teams derives from having in place some form of a respect for humanity.'[78] The competitive situation in the United States promoted delayed implementation of a quality system in the North American Market. Under the total quality management (TQM) philosophy, four significant elements were focused on; employee involvement, focus on customer, benchmarking, and continuous improvement. TQM is still an important part of today's organizations. Some pursue highly ambiguous quality goals to demonstrate their commitment to the philosophy. This is another reason for a variety of new systems and tools having been developed during the last 20 years.[79] Not only big companies such as Toyota, General Electrics, Texas Instruments, Procter & Gamble, DuPont worked closely with business excellence, but also small and mediums sized companies all over the world. In the same course, particularly highly ambitious companies do not just implement the well-established system. But adapt the reference systems to their environment and even develop new systems and tools. Furthermore they set a new norm for other manufacturing industries in the same branch. As shown before, especially the automotive industries lead the way here. This might be one reason why a huge number of system, system-names and tools ae learned and used in business. In fact there is very little literature available on the subject, most notably literature giving an umbrella perspective. Publications are in some cases even contradictory. But despite all the differences between systems the basic underlying philosophy remains tangible. In order to approach those commonalities and define an umbrella

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[76] Liker (2004), p. xv
[77] Liker (2004), p. xv
[78] Liker (2004), p. 198
[79] Daft (2010), p. 50

perspective for the research study an overview of the different systems being in place is given as shown below.

<table>
<tr><td colspan="5">Organizational Theory (1911 ff.)
Taylor –> Weber – Fayol – Barnard –> Maslow – McGregor</td></tr>
<tr><td colspan="5">Peter Drucker (1942/1999)
Father of Quality Management</td></tr>
<tr><td colspan="5">W. Edward Deming (1982)
14 Principles for Management – Toyota Production System - TPS
Structure of a house – People are in the center</td></tr>
<tr>
<td>TQM
Total Quality Management</td>
<td>OP
Operational Excellence Reference Model</td>
<td>Lean
Lean Management</td>
<td>TPM
Total Productive Management</td>
<td>EFQM
European Foundation of Quality Management</td>
</tr>
<tr>
<td>Overarching Quality System</td>
<td>Integrating technical and social subsystems</td>
<td>'Global Benchmark'</td>
<td>'TPM house build on 8 pillars</td>
<td>'European Model focussed on Strategy</td>
</tr>
<tr><td colspan="5">Leading with vision and succeeding through the talent of people</td></tr>
<tr><td colspan="5">Business Excellence (based on the European Model - EFQM)
incorporates essential communalities of all systems and focusses on the strategy approach</td></tr>
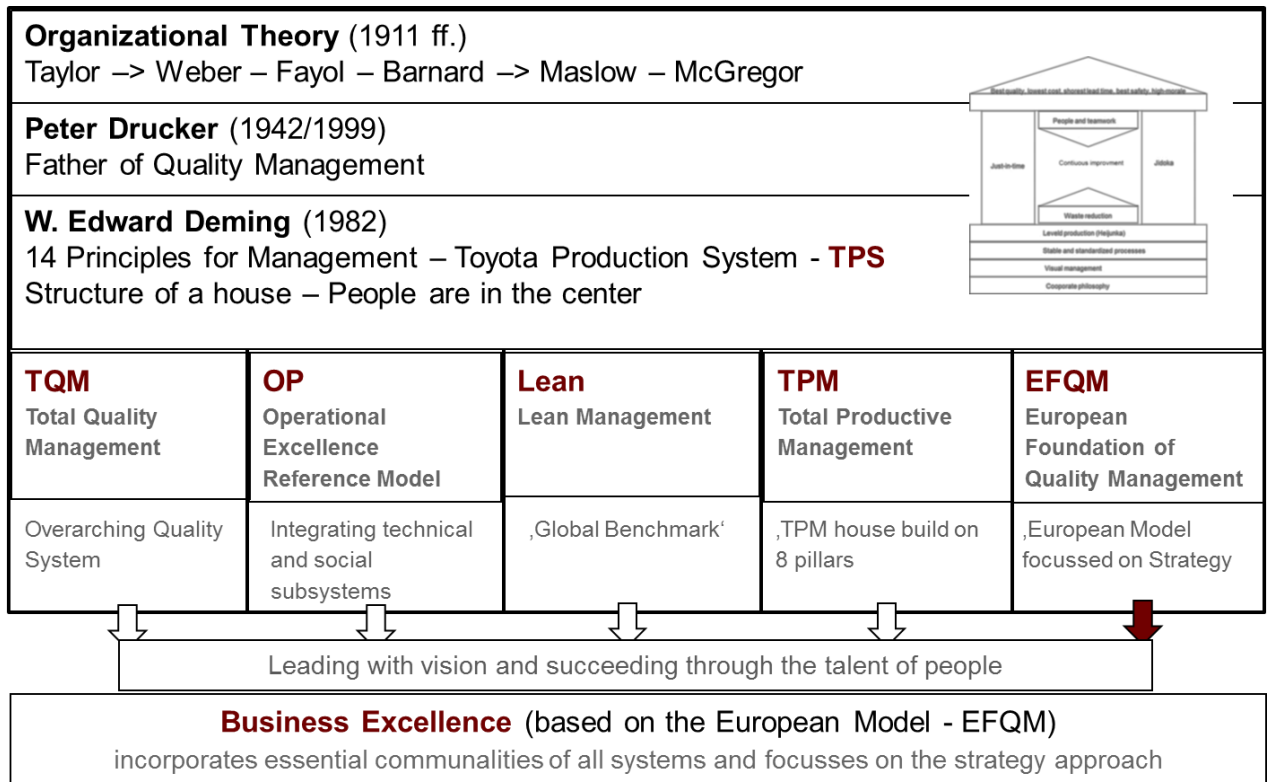</table>

Figure 1. 2 Umbrella perspective on business excellence – the chosen definition for the research study

Source: Author's figure

Shown before, the starting point was the development of TPS, 'Toyota Production System' and TQM, 'total quality management'. Both are based on the ideas of Deming and further developed by Toyota. Both are founded on 14 principles. The commonly used structure is based on a picture of a house. Liker describes the TPM house as a structure that is not stable if one part is missing. Although there are different versions in place, the core principles remain the same, enriched by specific tools and supported by a basic culture. In order to attain top quality, lowest cost, shortest lead time and stability standardized processes are the target. However central to the system are people who secure stability through waste reduction and continuous improvement.[80] TQM works in a comparable way by symbolizing an overarching umbrella quality system spanning over the whole company and applied to products, processes and people on all hierarchical levels including management level. Being structured in layers the system touches on the importance of leadership as well as on results from the workforce, across processes and

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[80] Liker (2004), p. 32

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performance, to knowledge management and measurement. The TQM model very much focusses on American companies. The concept of operational excellence (OP) gives new wording to the quality systems approaches based on the OPEC reference model. This model is divided into two subsystems: the technical subsystem and the social subsystem. Technical subsystems need to be integrated major operations management principles. These are namely, total quality management (TQM), total productive maintenance (TPM) and just-in-time (JIT). Further to this, basic elements for common practices were added namely standardization and visual management. The social subsystem includes direction setting, management commitment and company culture, employee involvement and continuous improvement, as well as functional integration and qualification.[81] A further step highlighting the importance of strategic thinking and success through people becomes clear here. The basic approach towards operational excellence, the total productive management system (TPM) supports a slightly different approach.[82] Going beyond the pure basics of TPM, evolving from the former total productive maintenance and focused on preventive maintenance and the involvement of people, the current TPM system comprises eight pillars, all contributing towards managerial areas. Consequently recent wording of TPM has been changed into total productive management. Based on this it has even been proposed that the terms operational excellence and TPM be used synonymously.[83] The eight pillars constituting the TPM house contain strategies and procedures for the integration of all employees into a continuous improvement process. One of the eight pillars is explicitly directed to competence management. As a result the involvement of the most important knowledge holder of the organization, the employees and their personal competencies – is the central focus of all TPM activities.[84] Following this idea not only competency itself but competent behavior in terms of practice and implementation is supported. The target is that the employee is enabled to make use of new learnings, continuously repeat this experience and with this become motivated to analysis and solve even more complex issues.'[85] A definition of competent behavior will be shown later. Representatives of the lean philosophy certainly would not accept lean management in a subordinate position of the model. Each philosophical perception claims a prominent position for

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[81] Friedli et al. (2010), p. 11, 18, 19-22 Within this model results of a benchmark study from various industries, done in 2006, have been incorporated.

[82] May (2007), p. 479 He evaluates the OE approach as being the only fundamental work in this field surrounded by a variety of unsystematic sequences of consulting approaches, but postulates the TPM approach, developed by Seiichi Nakajiama,

[83] May (2007), p. 479 Developed by Seiichi Nakajiama,

[84] May (2009), p. 14

[85] May (2009), p. 57, 58 –comment from the author: this refers to the definition chosen for competence in this research paper, being described in Chapter 2

its respective core element. The roots on which lean management has been developed can also be traced back to the TPS system. Likewise the original ideas of Drucker and Deming find their way into the lean management philosophy. The term lean management catched the highest attention through the publication of Womack, et al. and Krafcik, [86] In his study Krafcik presented data that illustrated the power of an integrative approach to human resource management, manufacturing strategy and the implementation of new technology. He further stated that the basic pre-requisite of high performance is not flexible automation but access to resources like a well-trained and flexible workforce, standardized product design of high quality as well as a supportive high performance supplier network.[87] In the European business environment, the journey to excellence is mainly led by the excellence model of the 'European Foundation of Quality Management' (EFQM). It comprises all aspects and tasks of a corporate management and thus also serves as a general leadership framework. The underlying philosophy of the model is that sustainable success of any organization relies on strong leadership and a clearly communicated strategy direction.[88] The current EFQM model is a further development of the original norms ISO 9001, followed by ISO 9004 and TS 16949. The structure of the first norms considered different elements which were equivalents to key departments of the organization. In the course of redefinition and adaption the ISO 9004 standard reflected already the process perspective. It was also intended to consolidate different norms. TS 16949 moved finally in the direction of a holistic management system and constitute the harmonizing of existing standards in the automotive industry. All systems described in this paragraph build the foundation for different standards and are in all cases combined with a specific quality award. Systems in Japan that refer to TPS are promoted by the Deming prize. In addition the TPM system is rewarded by the Institute of Plant Maintenance.[89] American TQM systems are acknowledged with the Malcolm Baldrige National Quality Award (MBNQA). In Europe the European foundation for quality management (EFQM) is the equivalent. Being 'the' European model, this standard is closest to the population of interest for this specific research study. Further to this it incorporates major relevant aspects concerning the research question that are to be shown in the following.

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[86] Holweg (2007), p. 434, he refers to Womack 1991 'the machine that changed the world' showing the results of the first global automotive benchmark study (MIT). and Krafcik, JF in 1988 publishing 'The Triumph of the Lean production System' and coining the term 'Lean'.
[87] Krafcik (1988), p. 51
[88] Friedli et al. (2013), p. 12
[89] May (2007), p. 483

1.2.2 APPROACHING THE CHOSEN PROJECTION ON BUSINESS EXCELLENCE

Companies that concentrate their efforts on the common basic underlying philosophy of all systems may be able to take advantage of compatible ideas from different systems. Therefore selected key aspects that touch on the particular area of the research question and being basically represented in all philosophies are of interest. As seen in all concepts shown before management commitment to a clear strategy direction is an essential element of all systems. Further to this continuous improvement through involvement and empowerment of employees is central. Basically those elements can be found in the social subsystem of the operational excellence house. Namely those are direction setting, management commitment and company culture as well as employee involvement and continuous improvement. Referring to the EFQM model two aspects fit particularly into this sequence. The first one is 'leading with vision, inspiration & integrity', and the second one is, 'succeeding through the talent of people'. [90] Friedli et al. come to the conclusion that central aspects of TPS, TQM and EFQM are the strong focus on leadership and the consideration of people to be the organization's most valuable resource.[91] These two basic fields are also underlined by Cua et al.. In order to figure out the compatibility of the practices of TQM, just in time (JIT) and TPM they identified a possible overlapping of all systems and developed guidance for a joint implementation. As a result Cua et al. suppose a common set of human and strategic-oriented practices, part of an integrating framework and shared by all three programs. These were found to be, committed leadership, strategic planning, cross functional training, employee involvement and information, and feedback.[92] In another study Shah and Ward support the idea of combining various practices from different systems. They underline that practices, although diverse, are complementary and inter-related to each other. In their study they identified four specific practice bundles (JIT, TQM, TPM and human resource management (HRM)) being significantly related to performance. Thus the problem solving capabilities that arise as a result of empowered work teams can help boost performance by identifying root causes of quality problem.[93] All systems put people in focus. Employee involvement is fundamental. Doing so, all systems strive for continuous improvement, empowerment, open handling of failures, communication and feedback. Furthermore all systems are based on clear and visible goals, management commitment and a supporting company culture.

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[90] EFQM (2012), p. 2
[91] Friedli et al. (2013), p. 14
[92] Cua, McKone & Schroeder (2001), p. 679
[93] Shah (2003), p. 134

In addition and regarding the research study another core element is to be seen in the strategy alignment of the concept. Whether quality management has contributed to management theory or management theory has influenced quality management, it is arguable in both directions. Certainly though as stated by Dale, since aspects like management vision, customer focus, process orientation and teamwork have been incorporated in quality theory, it also has to be incorporated into appropriate management theories.[94] Although all systems take an overall approach to respective organization and touch all fields of management, the EFQM excellence model particularly takes this position. Introducing the EFQM excellence model in a special issue, Herrmann van Rompuy, at that time president of the European Council, summarized the need for an EFQM model with the words, 'The world does not stand still. It is changing ever more rapidly. The interdependencies between organizations, communities, countries and economies are strengthening and increasing in complexity. To remain competitive in this environment, any organization needs to continually innovate and improve. Now, more than ever before, an organization needs to understand, balance and efficiently manage the needs and expectations of their stakeholders. The EFQM excellence model is a framework to understand and manage this complexity. The model is pragmatic and practiced by leading organizations, to stimulate continuous improvement.'[95] With reference to the eight fundamentals it becomes obvious that business excellence systems shall not be seen separate from strategic management but should be integrated. Leading with vision, creating a sustainable future, developing organizational capability; those are tasks that are directly linked to strategy. Friedli also points out that the focus on company strategy is explicitly noted by the EFQM system.[96] Based on these results the chosen umbrella perspective covers a few basic elements, which are relevant for the research study shown below.

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[94] Dale et al. (2001), p. 439
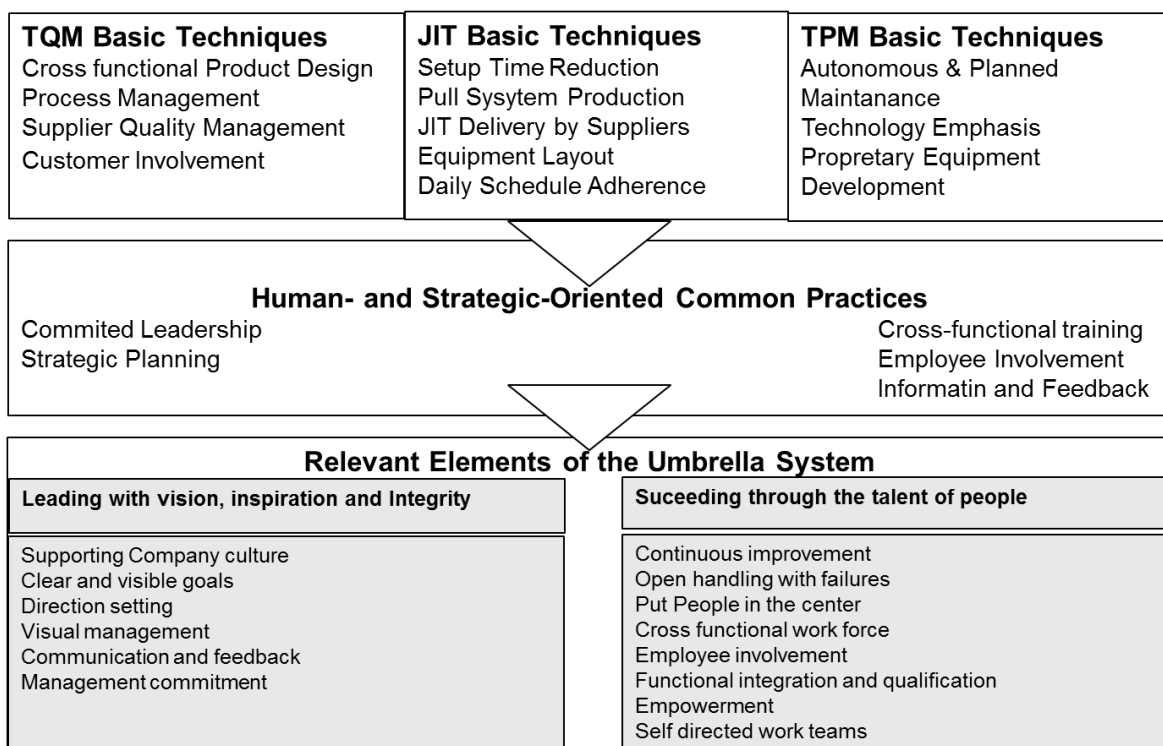[95] EFQM (2012), p. 2
[96] Friedli et al. (2013), p. 14

TQM Basic Techniques	JIT Basic Techniques	TPM Basic Techniques
Cross functional Product Design Process Management Supplier Quality Management Customer Involvement	Setup Time Reduction Pull Sysytem Production JIT Delivery by Suppliers Equipment Layout Daily Schedule Adherence	Autonomous & Planned Maintanance Technology Emphasis Propretary Equipment Development

Human- and Strategic-Oriented Common Practices

Commited Leadership
Strategic Planning

Cross-functional training
Employee Involvement
Informatin and Feedback

Relevant Elements of the Umbrella System

Leading with vision, inspiration and Integrity	Suceeding through the talent of people
Supporting Company culture Clear and visible goals Direction setting Visual management Communication and feedback Management commitment	Continuous improvement Open handling with failures Put People in the center Cross functional work force Employee involvement Functional integration and qualification Empowerment Self directed work teams

Figure 1. 3 Elements of the umbrella system – the chosen definition for the research study

Source: Author's figure based on Cua[97], EFQM[98] and Friedli[99]

The combination of strategic-oriented practices that are strongly oriented towards employee empowerment is evaluated as the common basis of all existing programs. In order to build a suitable roof for the chosen umbrella perspective has to cover those elements necessarily. The wording chosen for this umbrella perspective is business excellence. As shown the wording is strongly related to the model for excellence and this notion of business underlines that the concept is essentially positioned within the strategic management field. As a result the umbrella system applied to the research study is based on this corresponding conception.

1.3 ILLUMINATING THE PARTICULAR CHARACTER OF TRUST WITHIN THE CONTEXT OF SOCIAL CAPITAL

Trust is seen as the basic element of social capital within this research work. Arguments for this notion as well as resulting framework conditions build the starting point for the approach towards trust within this research paper. However, trust as a complex holistic concept is not easy to grasp. In order to approach it, the concept of trust needs to be delimited from adjoining

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[97] Cua, McKone & Schroeder (2001), p. 679
[98] EFQM (2012), p. 4
[99] Friedli et al. (2013), p. 506

concepts. This leads to a chosen definition of trust and its approached levels. Further to this a suitable perspective is directed at the specific interrelation of personal and institutional trust within organizations. But not before correlates to trust and its possible outcomes are reflected upon, the particular approach to the research study model can be defined.

1.3.1 THE SIGNIFICANCE OF THE EMBEDDMENT OF TRUST IN SOCIAL CAPITAL

Adler and Kwon state that there is a basic consensus that social capital derives from relationships.[100] Whereas human capital is symbolized by the knots of a network structure constituted by individuals; social capital is located in the relationships of this network. That is the complementary view Coleman has taken.[101] With this the availability of the resource of social capital is directly related to its location in the structure of social relations. Adler and Kwon describe that the core intuition guiding social capital research is influenced by the belief that the goodwill of others towards us is a vulnerable resource.[102] Although the concept of social capital has become increasingly interesting and popular, not only in social science but also in organizational studies, there isn't any consensus on the concept. Not only has the understanding and definition of social capital been developed over the last years, touching on different perspectives such as the sociological, social and economic perspective, added to a geographic and nation's view.[103] In addition, a fundamental attribute for the differentiation of the various concepts in place can be identified in the framework of social capital being internal, external or a combination of both.[104] Theorists debate whether social capital is a private or a public good or as well a combination of both.[105] Furthermore the term social capital has been conceptualized at individual, group, organization, community, and even national levels of analyzes.[106] With the topic of this research work in mind, being conceptualized as intra-organizational the focus will be on social capital within organizations, reflecting on trust between management and employees. It is therefore necessary to include representatives of these aspects like Jacobs (1965), Bourdieu (1986), Coleman (1988), Putnam (1995), Burt (1989) and Lin (1999) in the reflection on the

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[100] Adler & Kwon (2002), p. 23
[101] Coleman (1990), p. 304
[102] Adler & Kwon (2002), p. 17,18, with the notion of goodwill they refer to sympathy, trust and forgiveness.
[103] Baumane, I., Sumilo, E. (2007), p. 70
[104] Adler & Kwon (2002), p. 20
[105] Baumane, I., Sumilo, E. (2007), p. 72, 74
[106] Steinfield, DiMicco & Ellison (2009), p. 245

concept of social capital.[107] In a wide spectrum of a sociological analysis, the context of the rational choice theory, the theory of capital, reciprocal social relationships, network theory and the social resource perspective, different concepts have been developed independently without necessarily linking to each other. Reliant on the author as well as the respective research perspective, these representatives are grouped differently. Despite the various approaches it should be mentioned that along with the development of the contemporary society, social capital gains importance as the conditions for its production and reproduction deteriorate. This is because increasing division of work induces higher complexity of interaction. In order to cope with the complex requirements of the society individuals need bonds to the requirements of social interaction. In this context Modaschl argues that the perspective moves from social disparity, having motivated researchers like Bordieau and Coleman, towards the utilization of unused potential.[108] Also Baumane and Sumulo underline that social capital emerges as a new source for organizational advantage as it gives actors an opportunity to use and activate resources otherwise not available or available at greater cost.[109] This is a perspective also taken in the research at hand.

Further to this, core aspects of social capital can be identified independently of their theory background. Despite their varying focus, the aspects of networks, trust and reciprocity are reflected in most studies. Based on Putnam's idea, that cooperation is based on reciprocal relations that reinforce trust[110], the view on social capital is strongly linked to the interplay of those three elements and touches directly on the character of intangible personal resources in general. Thus the network notion is fundamental to the concept. Dependent on the strength of ties and the network partner both bonding and bridging social capital play a role. It can be imagined that both notions are relevant for organizations. As Steinfield et.al. accentuate, the concept of social capital has been analyzed extensively in organizational literature, with both constructs of bonding and bridging social capital relevant in organizations.[111] They also stress that bonding social capital in an organization implies that there is trust and a sense of obligation that encourages reciprocity, while bridging social capital is associated with the kind of weak ties that

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[107] Adler & Kwon (2002), p. 20,, see also Baumane, Ilona; Sumilo, Erika 2007, p. 70, 73, Moldaschl 2009, p. 88, Haug, 1997, p. 1-9, Nahpiet & Ghoshal 1998, p. 243
[108] Moldaschl , p. 101
[109] Baumane, I., Sumilo, E. (2007) p. 71, 72
[110] Putnam (1995), p. 664, Social capital is strongly linked to networks, trust and reciprocity
[111] Steinfield, DiMicco & Ellison (2009), p. 246, with this he refers to Adler and Kwon, 2002, Nahapiet and Ghoshal, 1998 and Tsai and Ghoshal, 1998

facilitate access to non-redundant or innovative information.[112] Baumane and Sumilo also emphasize that bonding social capital is rooted in and developed within established homogeneous social systems and is not shared with outsiders. As a result they come to the conclusion that bonding social capital is advantageous for the preservation of existing resources. This further leads to the indication that strong forms of bonding social capital might have negative impact on innovation and effectiveness of group work.[113] Steinfield also indicates that the bonding form of social capital functions strongly integrative and may be associated with feelings of social and tangible support.[114] At the same time reciprocity reduces by nature the degree of freedom.[115] An aspect that supports its imaginable limiting effect on innovation and creativity mentioned before. Moldaschl puts it to the point that any relation does not only offer opportunities, but also binds.[116] Different to this, bridging social capital is defined as the crosslinking between networks opening the view to the macro perspective.[117] It is based on relations between distant acquaintances connecting people from different social groups and therefore based on network ties between actors from otherwise disconnected groups. This is the reason that Steinfield argues that these large networks are more likely to include 'weak ties'.[118] As a consequence Baumane and Sumilo state that bridging social capital is more appropriate for search and acquisition of new resources.[119] It appears that also bridging capital has to be balanced carefully between supporting and inhibiting impetuses. As Hellmann reflects, it there is a gliding crossover area in which bridging social capital disintegrates the bonds within social groups in favor of bridges to external social groups. On the one hand relations between individuals have the function of providing the framework for self-perception and security showing the effects of integration. However the intensity of group identification has to be weakened due to a generalization of obligations and commitment as soon as the group is opened to other groups. This is the other side of the coin.[120] Although the research question is predominantly directed to the notion of bonding relationships within organizations, the challenging aspect of balancing it with bridging elements will not be disregarded throughout the whole research work. The aspect of reciprocity similarly plays an important role and opens up the view on the balance between a mutual exchange and an

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[112] Steinfield, DiMicco & Ellison (2009), p. 246
[113] Baumane, I., Sumilo, E. (2007) p. 73, here they refer to Bourdieu, 1985; Coleman, 1988; Putnam, 1993
[114] Steinfield, DiMicco & Ellison (2009), p. 246
[115] Hellmann (2004), p. 4, with this Hellmann refers to Stegbuer 2002, p. 157
[116] Moldaschl , p. 92
[117] Hellmann (2004), p. 4, see also Putnam 1995, p. 665
[118] Steinfield, DiMicco & Ellison (2009), p. 246
[119] Baumane, I., Sumilo, E. (2007) p. 73, here they refer to Granovetter, 1973 and Burt 1992
[120] Hellmann (2004) p. 5, here he refers also to Tenbruck 1964:445

opportunistic approach. Reciprocity plays a role in all three clusters of social capital, the structural, the relational and the cognitive one.[121] Structural social capital supports interaction, the cognitive dimension levels the way to shared values. It is in turn important to base the interaction on the personal interaction history.[122] Personal relationships thus rely on mutuality. As a result social capital is a resource that diminishes if the relations on which it is based are not sustained. Coleman underlines that mutuality is a pre-condition for social capital.[123] Further to this mutuality implies that the investment in social relations expects a return, a perspective Lin takes in his neo-capital theory on social capital.[124] Beyond this, the aspect of voluntariness plays a role. Haug illustrates that relationships that are based on voluntary exchange are called reciprocity relationships.[125] This voluntariness may be driven by opportunistic approaches or reciprocal contribution. At this point Modaschl builds a link between the trust concept and the humanistic model of Mc Gregor.[126] He states that contrary to the theory of rational opportunism and the idea of the 'homo oeconomicus'[127] the humanistic approach supports that trust in people releases potential and justifies a positive trust circle through increasing performance. The rational approach instead has huge difficulties in explaining the concept of social capital sufficiently. Consequently opportunism is the strongest barrier to the development of trust and its most efficient way preventing it.[128] This perspective is also underlined by Bliesner et al., pointing out that the increase of the intangible resource trust is practically free of cost but makes demands on involvement, fairness and reciprocity in order to avoid opportunity cost.[129] Also Neuert et al. come to the conclusion that the theory of reciprocity describes the complexity of human behavior more realistically, grasping more of the critical factors affecting an individual's decision in everyday life than the pure economic idea.[130] Falk even uses the phrase 'homo reciprocans' to underline that people need to be treated fairly in order to be willing to cooperate. He explains

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[121] Nahapiet & Ghoshal (1998), p. 244, they draw the structural and relational cluster on Granovetter, 1922 and the cognitive dimension on Cícourel, 1973
[122] Bolzern-Konrad (2013), p. 81
[123] Coleman (1990), p. 321, also Ekinor Ostrom (2000) relegates to the nature of social capital ' It does not diminish with use' or the other way: ' it diminishes with non –use' in Moldaschl, 2009, p. 92
[124] Lin (1999), p. 30, here Lin refers to social capital as a neo-capital theory. Given this, Lin argues that social capital is another form of the neo-capital theories. 'This is because laborers, workers or masses can now invest, and thus acquire certain capital of their own I form of skills and knowledge and with this can generate surplus values in trading their labor or work in the production and consumption markets.
[125] Haug (1997),p. 11
[126] McGregor & Cutcher-Gershenfeld (2006)
[127] Kirchgässner (2000) he additionally states: 'The 'homo oeconomicus' is a rational behaving individual aiming for maximized benefits.'
[128] Moldaschl , p. 90
[129] Bliesner et al. (2010), p. 35
[130] Neuert et al. (2005), p. 352

that, as long as individuals feel their companies care about them, they will contribute to the company in exchange. Furthermore an important point is to enable employees to perceive that the organization cares about individual development and treats them equally. It is decisive that the environment sends out clear signals concerning validity and compliance with rules and norms and that the behavior is reliable. Consequently Falk comes to the conclusion that social capital is an 'asset of mutual trust' and plays an important role in the company competence field.[131]

The result of integrating these perspectives into a definition which is applicable to this research study is as follows: Social capital is seen as investment in social relations based on the assumption that the other person or institution justifies trust and in return probably acts reciprocally. The investment opens opportunities to use and activate resources otherwise not available or available at greater cost. Consequently and comprising of interior bonds in the form of reciprocity, the aspect of trust as well as the conditions for its development come into focus.

1.3.2   EVOLVING THE PARTICULAR CHARACTER OF TRUST

Organizations face the challenge of achieving a balance between flexibility and stability. In order to cope with this challenge the resource of trust plays an important role. However this is not an easy approach. Actually the processes of change can even underlie a trust paradox. On one hand change requires trust; on the other hand change can reduce intra-organizational trust. In order to cooperate beneficially in such situations, frameworks are needed that allow a stable orientation and simultaneously retain the necessary flexibility in behavior.[132] Arising from this is the strategic need for an appropriate concept towards trust. To do so, the concept of trust needs to reflect the particular character of trust.

Based on its embedment in social capital, trust is a social resource that is created, changed, recycled and further developed by the interaction process of people. As Becke states, a positive process promotes this effect; a negative process might lead to devaluation, disturbance and exhaustion. Trust takes time to develop but can erode very quickly in case of disappointment and disturbance. Therefore trust has to be seen as a 'fragile' resource. Of interest is therefore to

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[131] Falk (2002) p. 944, the 'homo oeconomicus' is contrasted to the 'homo reciprocans: The 'homo reciprocans' builds the basis for the theory of reciprocity. He acts according to 5 principals: 1. Rewarding of fairness and punishing of unfairness, 2.Intention and process of the respective person which has to be free in decision, 3. Constraint cooperation and multiple balances due to imitating behavior, 4. Space for reciprocity in incomplete markets, 5. Interaction of different personality types (homo oeconomicus vs. homo reciprocans) depends on the possibility for sanctions against unfairness (Falk, 2001, p. 1-10) The concept of the 'homo oeconomicus tells the opposite story and is central in economics science and the basis for the theory of rational conduct. It is a model of individual behavior, which predicts rational and selfishness oriented individuals and builds the basis for designed and used models in economics. The 'homo oeconomicus' is contrasted to the 'homo reciprocans'
[132] Becke et al. (2013), article of Becke et al. p. 11

sustain and regenerate this valuable resource through the basic conditions in the organization.[133] This angle is also supported by Endress. He illustrates that trust is a resource that is not spent but built through usage, giving it a special and interesting feature compared to resources like raw materials, work time and financial capital.[134] Further to this there is the danger that trust stops to exist if it is specifically articulated or even discussed.[135] Therefore trust cannot be grasp directly. This is because it touches on different levels of perception including both emotional and objective elements. It only becomes manifest in specific frameworks and indicators. Attempts to discuss if and why trust exists fully may even lead to its damage.

Before touching on the development of trust concepts, its elements, correlates, levels as well as the process of trust, a delamination of aspects like confidence, hope, reliance, and familiarity is needed. Luhmann notably addresses the term familiarity in his research work. As to his explanations on familiarity he insinuates that best practice will be repeated, that the familiar world will continue to exist in future. Familiarity is a condition for both trust and mistrust. In worlds of familiarity the past dominates the present and the future. Trust however is directed at the future.[136] Confidence is an unspecific basic attitude in the light of insecurities of daily life. Confidence allows trust in the basic functionality of the world.[137] A possible disappointment based on risks can be neglected if confidence is in place. In contrast hope, reliance and trust relate to risk, implying the possibility of disappointment. Risks can be endogenous (open to influence) or exogenous (closed to influence). The reaction to exogenous risk is hope.[138] A hopeful person is confident despite insecurity, and in this way compensates for contingency. Trust though is always directed at a critical alternative and therefore reflects contingency.[139] In contrast to reliance, trust does not only assign to competence of another person or institution, it also takes into account the results of subsequent behavior. With this trust is a possible reaction to specific risk situations and the related behavior of another person or institution; a reaction implying the decision to depend

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[133] Becke et al. (2013),p.149/150, see also Ehnert 2009) in Becke p. 149, 150 see also Moldaschl 2009, p. 90: trust grows constant and declines disastrously.

[134] Endress (2008), p. 9 In general this special characteristic has been worked out before as regard to the opportunities of immaterial personal resources

[135] Endress (2008), p. 10 , Tthere is nothing to be disputed- trust is there or not you cannot discuss it.

[136] Luhmann (2014), p. 23, 126

[137] Seifert (2001), p. 21, an example would be the confidence that the neighbor identifies myself as neighbor and not as burglar because he knows me also the next day

[138] Gundert et al. (2011), p. 13, here they give example for confidence: I go to the supermarket and expect, that the chees, that I want to buy is not contaminated

[139] Luhmann (2014), p. 28, Luhmann gives an example: if a mother gives over her child to a babysitter, she has a variety of hopes: that all works well, that the babysitter is nice to the baby, that it does not disturb the baby with noisy music. Trust would only come into the picture in case something happens, that would induce her regret to give her baby in the hands of the babysitter

on others. Based on this differentiation to other concepts Luhmann defines trust as a 'risky performance in advance.'[140] Further to this he refers to trust in terms of complexity reduction. This implies, where trust is existent, new and unused possibilities arise and higher complexity is tolerated. Therefore Luhmann defines trust as a decision or action under situations involving complexity, uncertainty, risk and dependence on another person. '(...) in which the damage caused by the betrayal of trust can be higher than the opportunity resulting from the act of trusting.'[141] Basically this definition of trust is to be seen as the approach taken within this research study. However additional aspects of other researchers are considered as well when it comes to the development of the research model. This applies predominantly to the analysis of relevant elements of trust as well as the question of whether risk taking behavior should be part of the model. Besides Luhmann's sociological approach a huge number of researchers from other disciplines deal with the issue of trust. As Rousseau et al. explain in their cross-discipline view on trust, sociologists find that trust is socially embedded properties of relationships among people, whereas psychologists are interested in the ontogenetic development of trust tracing back to Freud, Ericson[142] and Rotter[143]. They commonly frame their assessment of trust in the form of attributes of trustors and trustees and focus on personality traits. Political scientists in contrast mainly analyze trust as generalized confidence in the behavior of fellow human being and towards institutions. Philosophers reflect on trust as a result of a binding moral between trustor and trustee. Economists model trust mainly as a choice in behavior towards or against cooperation in game-theoretic situations. They tend to see trust either calculative or intuitional.[144]

As regard to the research question the focus of this work will predominantly lie on the general correlation between trust indicators with employee competence utilization indicators, not on a personality driven analysis as suggested by psychologists. Being evaluated as a valid element of the trust concept though, the aspect of propensity and trustworthiness will be included in a generalized way. Nevertheless there will be no detailed analysis of different personality bonds within the present research work. The economics' perspective predominantly approaches the risk concept with a general attitude towards decision making theories. It is a question of

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[140] Luhmann (2014), p. 27
[141] Luhmann (2014), p. 9, 27, 38, see also Luhmann 2000b: 28
[142] Erikson (1950), see also Erikson (1968) and (1980)
[143] Rotter (1954), see also Rotter (1967) and (1971) and (1981) Mayer et.al (1995) refer to this perspective as the trait that leads to a generalized expectation about the trustworthiness of others, p. 715, also Schoorman et al. 2007, p. 346: the dispositional aspects of trust considered by Rotter are contained in the construct of propensity to trust in our model.
[144] Rousseau, Sitken & Burt (1998), p. 393, here she refers to Rotter 1967, Deutsch 1962, p. 395

whether the individual is rational and selfish or rewards fairness and punishes unfairness. Experimental studies of choice involving elements of risk have been pictured especially in the behavioral decision theory and the prospect theory of Tversky and Kahneman.[145] It has been shown in many experiments 'that humans by no means behave so selfish and future oriented as the standard models of economists predict'.[146] The concept of the 'homo oeconomcus' has been tested in a number of experiments. The result was that the majority of participants behave reciprocally, which means that they reward fairness and punish unfairness.[147] Especially the experimental economic research with the classical experiment 'Ultimatum Spiel' has clearly illustrated that the behavior of a huge number of people in interaction in small groups is affected by the imagination of 'fairness' and 'reciprocity'.[148] As shown before with the embedment of trust in the theory of social capital the role of reciprocity is seen to be decisive and taken as a general assumption and underlying condition for the research at hand. Still, similarly to the personal propensity towards trust, the level of risk affinity is also naturally tied to personality. But as being stated the personality impact on risk-affinity will not be taken into account within this research work. Moreover as Das and Teng state, research has shown that, despite individual differences, people generally are risk-averse. They prefer low risk situations compared to high risk situations. Thus everything else (e.g. a person's risk propensity) being equal, when one believes that a certain task is less risky than another, one is more willing to be engaged in that certain task. [149] Depending on the development stage of trust and the respective qualitative degree risk perception changes also. People need different degrees of trust in order to compensate for perceived risk depending on their personality. The level of risk is also perceived differently. Nevertheless the general mechanisms stay the same for all people. However the logic of risk plays an important role in defining trust. Trust is the willingness to take risk, and the level of trust is an indication of the amount of risk that one is willing to take.[150] As Das and Teng state, most definitions suggest that the idea of risk is a significant uncertainty or variance in outcomes, especially of losses. While subjective trust refers to assessed probability of having desirable

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[145] Kahneman & Tversky (1979), p. 263
[146] Grötker & Ralf (2009), p. 80
[147] Falk (2001), p. 1
[148] Schmidt (2004), p. 18,19, he refers to Güth et al. (1982)
[149] Das & Teng (2004), here they refer to Vromiley & Curley, 1992, Lopes, 1987
[150] Das & Teng (2004), p. 87, Das and Teng refer here to the definition of Kahneman & Tversky (1979) and Yates and Stone (1992): Most definitions suggest the following idea on risk: uncertainty or variance in outcomes (especially losses) of significance.

action performed by the trustee, perceived risk is assessed probability of not getting the desired results. Thus they state that trust and perceived risk are like mirror images of each other. [151]

Approaching a suitable definition and specification of trust authors reflect differently on forms and quality levels of trust. Rousseau, Schweer, Shapiro and Eberl refer to the trustor's perception. Starting with pure opportunistic approaches they develop trust qualities in different steps that increasingly reliant on communication, repeated interaction and experienced behavior. Shapiro et al. introduce a level model which develops from trust based on calculation and deterrence to trust based on knowledge and experience towards identification based trust.[152] Similar to Shapiro, Rousseau differentiates different forms of trust as deterrence based trust, calculus based trust, relational trust, and institution based trust. In the first form costly sanctions for the breach of trust are in place that exceed any potential benefit from opportunistic behavior. Calculus based trust is based on rational choice and emerges when the trustor perceives that the trustee intends to perform an action that is beneficial. As Rousseau remarks this form of trust may be limited to situations where evidence of failure to perform can be obtained in the short term. Relational trust derives from the relationship based on repeated interaction. With this repeated cycles of exchange, risk taking and successful fulfillment of expectations strengthen the willingness of trusting parties to rely upon each other and expand the resources brought into the exchange. Based on the confidence that reputation matters, institutional factors can act as broad supports for the critical mass of trust that sustains further risk taking and trust behavior.[153] Eberl mentions that different types of trust do not suspend themselves, but might complement each other and symbolize different qualities of trust. He states that trust in competence becomes trust in integrity which then develops into trust in good will. Based on this view he further illuminates that the reflection on specific information moves from the characteristics of the interaction partner (characteristic-based-trust) to the institutional frameworks (institution-based-trust) and

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[151] Das & Teng (2004), p. 87, p. 110, Das and Teng refer here to the definition of Kahneman & Tversky (1979) and Yates and Stone (1992) Additionally behavioral trust is seen to be the manifestation of trust in terms of allowing the trustee to perform a certain task or placing resources at the trustee's proposal. With this they position their work close to the results of Mayer et al. but don't differentiate between trust and trust-behavior as strictly any more. Their focus is made on multidimensional mirror-image relationships of trust and risk. Two aspects are seen to be valid for the research paper at hand. First they illuminate that goodwill trust and relational risk are mirror images of each other. Specifically this means that in the case of a trustee being perceived to having good intentions the relational risk described full commitment to the relationship and is therefore low. Consequently goodwill protects against opportunism. (p. 101,102,103) – see also the explanations to the issue of homo reciprocans. Secondly they note the straightforwardness of the relationship between subjective trust and behavioral trust on the basis of perceived risk and risk taking. With this they offered an alternative explanation to Mayer et al.: the relationship between subjective trust and behavioral trust is tantamount to that of perceived risk and risk action.(p.111)
[152] Rupf Schreiber (2006) p. 99
[153] Rousseau, Sitken & Burt (1998), p. 396-400

finally to the transaction history (process-based-trust). [154] Finally Schweer reflects on trust as a social engagement, which has to be tapped through behavior. With this he specifically refers to the performance part of the trust concept. [155] Having dealt with these different approaches it can be asked whether sanctions foster or substitute for trust. Also Schweer and Thies question whether the first steps of trust quality are really located within the trust terminus as control and sanctions are immanent.[156] In their work on trust in organizations, Dietz and Hartog summarize the different views on qualitative degrees of trust and classify them. Remarkably they state that the first degree, 'deterrence trust' does not comply with their definition of trust, nor calculus based trust can be considered as real trust in this sense. Real trust, as they state, is most commonly defined in literature to begin with knowledge based trust. Relational based trust is seen to be even more powerful as expectations are vindicated by experience. Moreover it is more subjective and emotional in nature as it derives from the time invested in relationship not simply based on observation.[157] This statement also fits in with the multidimensional view on the trust and risk, telling that goodwill trust and relational risk are to be seen as mirror images. Specifically this means that in case the trustee is perceived to have good intentions, the relational risk describes full commitment to the relationship and is therefore low. Consequently goodwill protects against opportunism.[158] A summary of the different perspectives as well as the chosen projection for this research work is shown in the diagram below.

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[154] Eberl (2010), p. 241, he refers here to the different basics of trust conceptualized by Mayer et al, 1995 and Schoorman et al 2007 which will be touched on in Chapter 2 of this work

[155] Jammal (2008), article of Schweer, p. 13, he refers to Schweer & Padberg (2002) as well as to Rosenberg & Hovland (1960)

[156] Schweer (2003), p. x

[157] Dietz & Hartog (2006), p. 563, they state that deterrence based trust does not comply with the definition as there is no positive expectation of goodwill and only through the threat of external sanctions and force are the expectations of compliance guaranteed. There is effectively no risk and are no probabilities to consider. Rather than reflecting trust it is a manifestation of distrust. Calculus based trust is only considered a worthwhile strategy on the basis of a strict cost-benefit analysis, but a deep suspicion of the other party remains. Moreover the decisive evidence is likely to come from sources other than the trustee. With knowledge based trust suspicions recede to be replaced by positive expectations based on confident knowledge of the other party, including their motives, abilities and reliability.

[158] Das & Teng (2004), p. 101, 102, 103, see also explanations to the issue of homo reciprocans
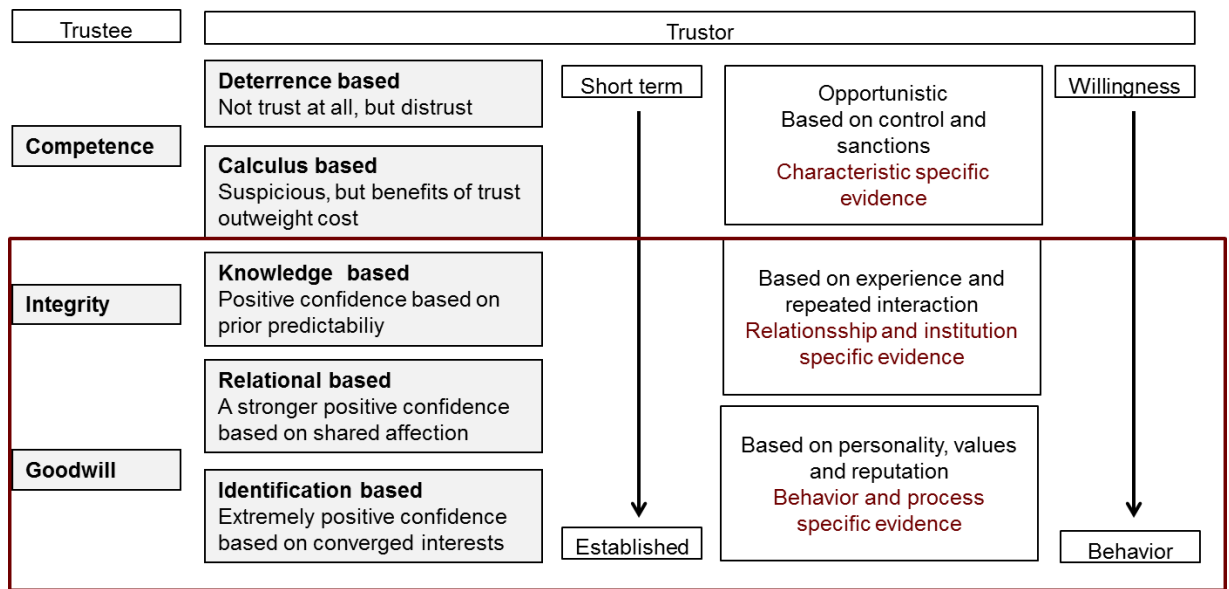
Figure 1. 4 Projection on trust quality levels – the chosen definition for the research study

Source: Author's selection

With respect to the research study, the opinion held that long term sustainable trust needs to be based on repeated interaction as well as on mutually internalized norms and the desire to fulfill those. This given, the focus needs to be made on the behavioral aspect as well as on commonly shared institutional norms. This given, the underlying definition of trust regarding the integration of trust behavior becomes interesting. As stated before, Luhmann refers in his definition on trust to a decision or action involving complexity, uncertainty, risk and dependence on another person implying the possibility of vulnerability. [159] Recognizably he includes both decision and action. Dietz and Hartog define that the three necessary constituent parts of trust are, the expectation, the willingness to be vulnerable and the risk-taking act. [160] This definition describes distinctively the risk-taking act. Mayer et al. define trust as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. [161] With this they correspond to both the expectation and the acceptance vulnerability, but don't explicitly include risk taking behavior into their definition. Rousseau defines trust as an underlying psychological condition. She defines trust as a psychological state of comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.[162]

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[159] Luhmann (2014), p. 38, see also Luhmann 2000b: 28
[160] Dietz & Hartog (2006), p. 560 they refer with her definition to McEvily et al 2003, p. 93
[161] Mayer, Davis & Schoorman (1995), p. 712
[162] Rousseau, Sitken & Burt (1998), p. 395

With this she sees trust as an attitude unlike behavior. Comprising these definitions, with the chosen trust quality levels in mind, the definition of trust applicable for the research study shall be based on Luhmann and Dietz. As a result the chosen trust definition for the research study is summarized as follows: Trust derives from relationships and is defined as the willingness to be vulnerable in a complex uncertain situation dependent on another person. It is based on a positive expectation on mutuality and results in risk taking decision and action. Referring to the basic benefit of social capital this risk taking action implies the potential to utilize unused resources. Therefore the trust-based-action implies the potential to realize unused resources.

The different quality levels of trust also refer to institution and process specific evidence. Repeated behavior and shared values are not only an expression of individuals but they also symbolize the reputation of the organization as a whole. This additional aspect is pictured in Luhmann's concept of system trust. It is based on the assumption that trust becomes effective if the individual not only trusts in other individuals but also in the system and its functioning. System trust does not make personal trust and mistrust redundant, it depersonalizes these mechanisms.[163] Those who trust, do not do so at their own risk, but on at risk of the system.[164] Giddens also concedes mechanism of trust in abstract systems. However he explains system trust with the concept of calculation. Furthermore he underlines the combination of personal and systemic trust. This is because personal interfaces embody access points to the system that may make the system vulnerable and at the same time provide possibilities to establish or grant trust. In this context Giddens argues that increasing specialization leads to the need of individual trust but also organizational trust.[165] In his differential theory Schweer touches on the interplay between personal (individual trust tendency as filter for perception) and situational factors (Symmetry of relation structure, voluntariness of relationship, possibility for open communication, and duration of relationship).[166] Rupf-Schreiber's argumentation similarly contributes to the integration of institutional trust mechanisms. She states that organizations and systems are mostly represented by humans and therefore a personal trust mechanism always has

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[163] Bohn (2007), p. 32

[164] Luhmann (2014), p. 61ff

[165] Giddens (1996), p. 197, 108,112,113, see also Hörlin and Ellrich in Becke (2013), p. 90

[166] Jammal (2008), see Marrin Schweer, ‚Vertrauen und soziales Handeln- eine differntialpsychologische Perspektive' p,. 16,17,18, He understands Rotter's perspective to be a stable personality disposition and Deutsch's view as a being a function of a situative framework responsive to the willingness to cooperate. He states that any variation of behavior results in a combination of personal and situational aspects which build together the condition for per formative action. Based on this assumption he developed his differential perspective. In Chapter 2 the author will refer to this aspect

to be considered'. [167] Especially the aspect of reputation demonstrates the combination of interpersonal and institutional trust mechanisms. This argumentation is chosen for the research study and is also shown in the diagram below.
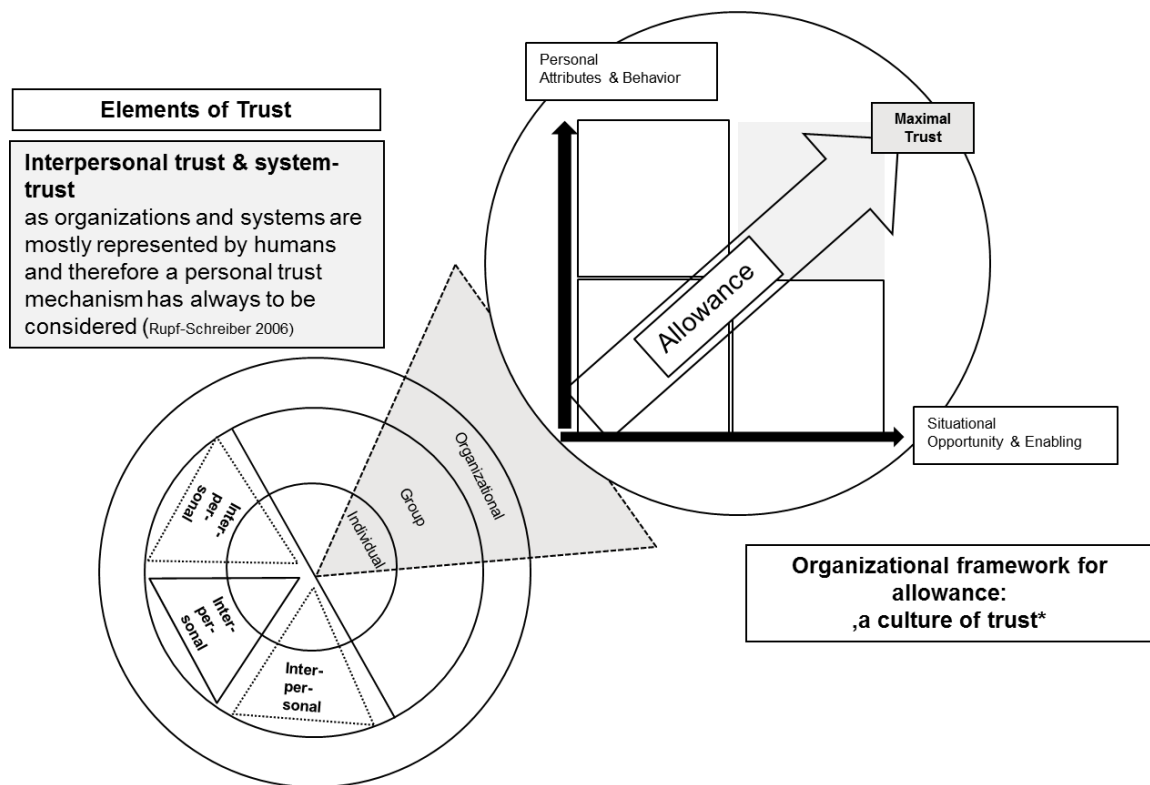

Figure 1. 5 The research concept of trust

Source: Author's model

The diagram shows that the perspective on the indirect variable 'trust' combines elements of interpersonal trust and system-trust. Based on this combined view a culture of trust is intended to establish a framework of allowance in order to provide a personal and situational foundation that result in the basic benefit of social capital to release potential otherwise not available.

The aspect of system-trust also opens the way for correlates. This is because system-trust brings rational elements back into the picture. Luhmann does mention system-rationalization in this sense. In order to remain open to changes and renewable some systems need strong inclusions of distrust. In this way distrust is used to prevent a diffuse feeling of 'mutual reliance'. Luhmann describes this mechanism as follows. The function of trust to reduces complexity and with this it eases the decision of taking on risk. Extreme complexity overburdens people and makes them incapable of action. Therefore, humans or systems that do not trust must necessarily rely on functional equivalent strategies in order to reduce complexity. They must sharpen their

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[167] Rupf Schreiber (2006), p. 105, see also Bliesner 2011, p. 15 and Gillispie in Lyon 2012, p. 176

expectations towards the negative, must become skeptical in specific aspects. Distrust therefore provides simplification as well, sometimes to a dramatic extend. But he who mistrusts needs more information and at the same time he narrows down the information, he believes he can rely on and in this way becomes increasingly dependent on less information. The interesting aspect of system-trust is that on the level system's distrust can be de-personalized. With respect to the research study and its embedment into the business excellence context and specifically the aspect of failure-handling and continuous improvement will be analyzed accordingly. As an example in organizations controls can be established that operate under specific distrust arrangements, in which trust is applied to the functioning of distrust itself. However the author prefers the term 'challenge' rather than 'distrust' at this point. This would also suit the second example, allowing specific roles in organizations that support to seeing familiar things as unfamiliar and monitor those with distrust. Again, the preferred wording for this research work would be 'multiangulation' rather than 'distrust' according to the author's understanding. But it should be emphasized that on one hand distrust can be the origin of inner organizational conflicts, especially if it is not specified and is impersonal but that when it comes to innovation distrust is seen as a necessary tool.[168] As mentioned at the beginning of this paragraph the processes of change may underlie a trust paradox. On one hand change requires trust; on the other hand it may reduce trust. In addition change might provide the nutrient medium for distrust between players. Hörlin and Ellrich explain that it is necessary to translate latent mistrust into a kind of legitimized form of problem communication. Being institutionally anchored, distrust can compensate for possible weaknesses of trust and support innovation. It may be seen as a productive power which enriches the required trust culture including elements of distrust, in order to contribute for workers innovation. The potential of distrust is seen in the support of new ideas, discussions from different perspectives and in consequence through movement of plugged-in thought patterns.[169] Here again the chosen term 'multiangualtion' matches perfectly. Necessary frameworks are pictured in reciprocal behavior and an open failure culture - again an aspect of explicit interest in the business excellence context. Hörlin and Ellrich take the position that trust and mistrust are to be seen as two distinctive, coexisting constructs that can exist in different degrees at the same time. This is because they are multidimensional concepts. Consequently missing trust may not be equalized with mistrust vice versa the absence of distrust does not automatically imply trust. The traditional approach was based on the rational-choice theory viewing trust and distrust as two

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[168] Luhmann (2014), p. 93, 99, p. 116, p. 121, p. 124, here Luhmann refers also to A.W. Gouldner 1954 b
[169] Becke et al. (2013), article of Hörlin & Ellrich, p. 97

static cornerstones of a one-dimensional continuum. Hörlin and Ellrich don't support this 'all-or-nothing- view.[170] Lewicki et al. even propose a theoretical framework in order to understand trust and distrust simultaneously within relationships. Illustrating that relationships are homeostasis driven by balance and consistency, both trust and distrust can exist within multiplex relations. They further state that trust and distrust both entail certain expectations; but whereas trust expectations anticipate beneficial conduct from others, distrust expectations anticipate injurious conduct. Although defining trust and distrust as being reciprocal, they view them as separate and distinct constructs.[171] Based on these standpoints towards the trust-distrust balance it can be assumed that continuous improvement concepts and institutionalized open failure handling are frameworks that build the basis of business excellence systems that comply to this idea. Moreover the aspect of scrutinizing existing ideas while working on new patterns of thought may be seen as a core part of competence concepts, especially of the creative and innovative element within the concept.[172] This should not distract from the fact, that distrust is an element has a high destructive character when it is not institutionalized. As a result in the same manner as personalized distrust may function destructively, institutionalized distrust may be effective in addition to or in support for trust.

The same is true for control. The phrase, 'trust is good, control is better' is well known. As shown before the definition of trust implies the inability to take control over and monitor the other party. This applies to the interpersonal trust relations as well as to system trust relation and can be taken in consideration for both symmetric and asymmetric relationships. The inability to take control results in the fact that the individual is dependent on others. Dependence can be defined by the extent to which outcomes are controlled by, or affected by the outcome of another party.[173] A crucial element here is information which is asymmetric between actors; this is analyzed in its impact by Akerlof. Sometimes there is insufficient information to ensure success, but due to the existence of trust the missing information is purposely overridden by the actor.

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[170] Becke et al. (2013), article of Hörlin & Ellrich, p. 20, 95 the all-or-nothing view has been ruptured by theorists like Rousseau and Lewicki.. Referring to the different phases of trust described by Rousseau et.al, they do see trust not as a static phenomenon, where one person either completely trusts or completely distrusts. Focused on highly structured games, such as the Prisoner's Dilemma trust can only represent a single point also it has to be seen as a distribution along an intra or interpersonal continuum.

[171] Lewicki & McAllister (1998), p. 441, 444

[172] Eberl (2009), p. 98, see competencies, being explained later: the affective dimension refers to creativity and motivation in unsecure environments.

[173] Ripperger (1998), p. 64

Alternatively information asymmetry would lead to lower competent action. [174] This is aspect is also touched by Stigler, analyzing situations lacking information in the labor market. He supports the idea that misbalances have to be compensated, because complete knowledge is seldom possessed. Reason for this is the complexity of the environment but also the cost being higher for learning about all alternatives than the information yields.[175] Control, respectively lack of control, has to be broached from different angles. Eberl reflects on trust and control in a critical way. The effect taken is that trust has a positive economic effect because control related transaction costs can be reduced, Eberl argues that the theoretical logic of transaction cost and principal agent theory are different to the trust theory, concluding that the basic logic of trust is not based on the opportunistic assumption. This position has been exposed before; within the trust concept the intention is not to minimize risk through control but to accept risk in order to gain an effect that would not be possible based on pure control. Therefore the aspect of control is fundamentally questioned. Nevertheless the statement, 'trust does not need control' is not sufficiently understood. Control can be seen as an aspect of coordination mechanisms, set in place indirectly in the form of cultural values. Compliance to these values might be seen as a social form of control; a form of control that should not be seen as a substitute for trust but on the contrary, as a basis for trust. Trust may also be effective as a coordination mechanism, reflected in standardized workflows and self-determination within groups. In this context self-determination has to be understood as self-initiative directed at the achievement of collective goals. Plausible are also cases where trust is not necessarily needed because established control forms are implemented and accepted. Trust in not necessarily needed in environments where mechanisms for the control of behavior and results are in place. In contrast, there are cases imaginable where efficiency control is not possible. Cases such as these are trust critical and trust is the only alternative.[176] Based on these explanations a variety of authors conceptualize trust and control in a comparable way as was done with respect to trust and distrust. Jagd votes for an interactive process of trust and control that needs to be balanced in organizations. Analogous to Lewicki et al. approaching a balance between trust and distrust, Jagd suggests that balancing trust and control is an ongoing process. He also states that trust and control are both substitutes of each other and complements

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[174] Akerlof (1979), p. 500, he discusses economic models in which trust is important due to information asymmetries, 'The market for lemons'

[175] Stigler (1962), p. 94

[176] Eberl , p. 244, p. 246, p. 247-249, p. 250 here he refers to Zaheer/Venkatraman 1995, Sako 1998, Zaheer et al. 1998, Dyer/Chu 2003, as well as meta-analysis of Chiles/McMackin 1996, here he refers to the work of Das/Teng (1998)

of each other and are furthermore two separate routes to risk reduction. [177] Schoorman et al. do not see trust and control mechanisms as being mutually exclusive. On the contrary, they state that when the risk in a situation is greater than the trust (and thus the willingness to take risk), a control system can bridge the difference by lowering the perceived risk to a level that can be managed by trust. [178] As a result trust correlates need to be balanced with trust but can even be supportive to trust. The interrelation of trust elements and its correlates is summarized below.
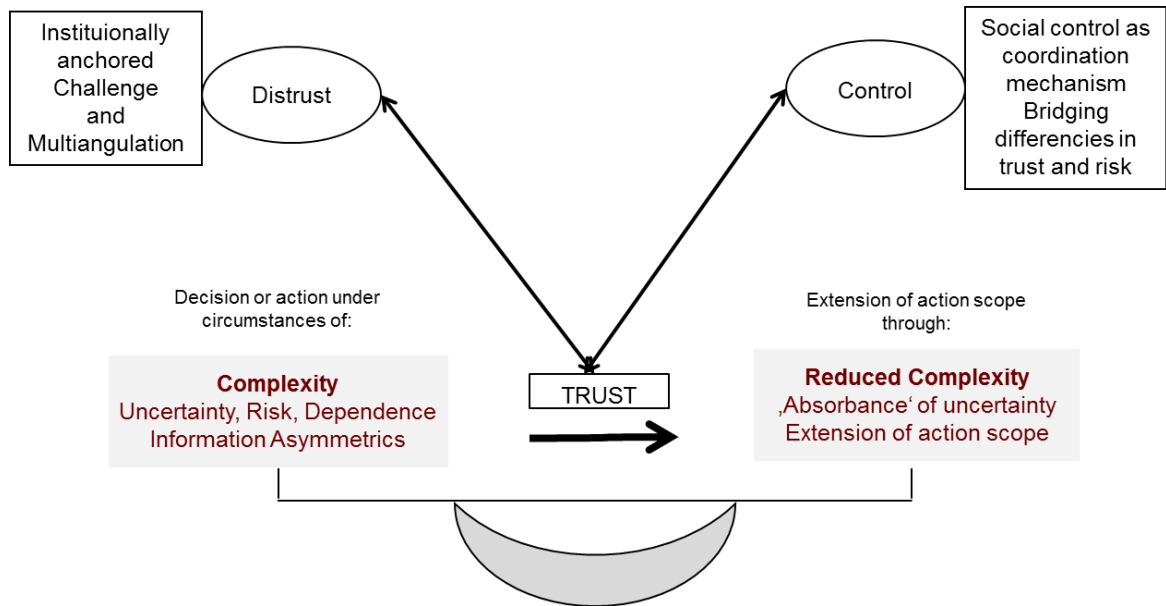
Figure 1. 6 The trust balance towards its correlates

Source: Author's model

To summarize, with the topic of this research work in mind, the following conventionalization is based on trust within organizations and reflects on trust between management and employees. Though the viewpoint is that of the individual in the organization who develops trust towards other individuals, groups, or organizations that are mostly represented by individuals. For this reason the argumentation will be that both personal trust and organizational trust mechanism are to be considered. Reflecting on the different quality levels for trust, the approach to trust is based on higher quality trust, based on relationship specific evidence. In doing so, the approach to the topic is additionally based on the reciprocity assumptions in favor of the opportunistic alternative. Furthermore, the aspect of trust action is seen to be necessarily implied in the trust definition. Essential 'institutionalized challenge' and 'multiangulation' will be considered as 'trust supports' and forms of bridging social capital with

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[177] Jagd (2010), p. 259, p. 267, p. 263
[178] Schoorman, Mayer & Davis (2007), p. 346, here they argue that one of the major distinctions between agency theory and stewardship theory is the use of trust versus control systems

regard to the business excellence conception. Generally it shall be noted that the research measurement is intended to be done on the individual level, however it will not be a personality driven analysis. Although the elements of propensity and trustworthiness will be touched upon, this will be done based on a general perspective.

1.4 IDENTIFICATION OF DIFFERENT SCIENTIFIC PERSPECTIVES ON COMPETENCIES AND ITS UTILIZATION

A variety of studies directed at trust in organizations reflect on different possible outcomes. Lachner et al. point out that research has shown that trust leads to faster and smoother business transactions, that it helps work teams to be more efficient and employees learn faster. Trust also reduces the need for control mechanisms. In addition trust facilitates the handling of risk and actually helps to increase the level of cooperation and with this also supports conflict resolution behavior. It also promotes a positive attitude as well as motivation and engagement. In this respect the aspect of complexity reduction is of particular importance.[179] These outcomes of trust are also touched on in the research work of Adler & Kwon. They reflect on career success, recourse exchange and product innovation, the creation of intellectual capital and cross-functional team effectiveness, reduced turnover rates and organizational dissolution rates.[180] With regard to the research work at hand and based on the chosen definition on trust, it is assumed that trust leads to a reduction in complexity as well as allowing a risk taking action. This action implies the potential to realize unused resources which again is tied to performance. The specific route to the utilization of competencies implies aspects such as motivation, engagement, effectiveness, turnover rates, learning and innovation, all of which are seen as outcomes of trust. Furthermore the counterpoints of a trust framework are closely intermingled with the realization of competencies. As shown before, human capital is symbolized by the ties of a network structure connected through relationship networks of social capital.[181] Knowledge and skills are positioned within human capital, whereas trust is an integral resource within social capital.[182] Consequently it can be assumed that competencies begin to flow as soon as they are connected to each other. The mere presence of firms, suppliers, and institutions in a location creates the potential for economic value, but it does not necessarily ensure the realization of that potential'. 'How can

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[179] Becke et al. (2013), p. 232, article of Lachner et al., with this they refer to: Cohen and Prusak 2001, Beckert, Metzner & Roehl, 1998, Galford & Drapeau 2003, Schweer and Thies, 2003, Graef, 1998, Kastner, Kastner & Vogth 2000

[180] Adler & Kwon (2002), p. 17, they refer to: Burt 1992, Gabbary & Zuckerman, 1998, Hargadon & Sutton 1997, Rosenthal, 1996, Krackhardt & Hanson, 1993, Pennings, Lee, & van Witteloostuijn, 1998

[181] Coleman (1990), p. 304

[182] Klinke & Rohn (2013), p. 119, article of Moldaschl: ,Ressourcenkulturen messen, bewerten, verstehen'

management ensure that employees are willing to contribute to the success of the company?' These are the questions that will be addressed. In order to approach the aspect of competence utilization, the concept of competencies itself has to be first understood.

1.4.1   INTEGRATING PERSPECTIVES ON INDIVIDUAL AND ORGANIZATIONAL COMPETENCIES

As shown before, intangible personal resources and their unique usage are a decisive element of an organization's strategy and competitive advantage. With the intention of selecting a definition and choosing a perspective compatible with the research question, a reflection on the different scientific approaches is considered necessary. Competence management is influenced by various scientific perspectives. With the historical development of the competence definition in mind the discussion debate has moved from a purely individual perspective to one focused social systems and organizations.[183] Furthermore, for both individual and organizational levels of competence, the research has moved from a more stability oriented view to a dynamic view.[184]

Besides psychological and educational approaches, sociological and organization theoretical approaches also exist.[185] The competence construct is considered and defined differently in relation to its content. Reinhardt and North divide publications on competencies into organizational and cognitive sciences. Cognitive science takes a psychological and sociological perspective. This perspective mostly concentrates on individual competence classification directed at the learning process between individuals. This perspective comprises of psychological approaches, which analyze individual cognitive abilities and sociological approaches, context related and focused on performance and educational sciences considering the potential for action and their conditions to be the central aspect, which is a perspective perfectly matching the research study.[186] Basically the core of all approaches can be seen as the 'abilities and dispositions' to cope with context specific requirements. These incorporate the abilities and willingness of the individual applied to specific situations in order to manage complex problems through 'realized abilities'.[187]

Various perspectives can be categorized as being directed either at individual competences or organizational competencies. It is current practice to refer to Weinert in order to define

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[183] Bolzern-Konrad (2013), p. 78
[184] Eberl (2009), p. 26
[185] HRK Hochschulkonferenz (2012), p. 13
[186] Reinhardt & North (2003), p. 1373(Gruber and Renkl 1997; Hänggi 1998; Erpenbeck and Heyse 1999a; Erpenbeck and Heyse 1999b)
[187] HRK Hochschulkonferenz (2012), p. 12, 13, They refer also to Paetz, et.al. (2011)

individual competencies. Being a representative of educational science his definition on competencies is that, 'competencies are cognitive skills, either existing or learnable, along with motivational and social willingness and ability to solve these problems successfully and responsibly in various situations.'[188] Also reflecting on individual competence understanding and with this   linking back to the psychological and educational perspective, Eberl subsumes in another work, that the connecting bracket on competence definitions has to be seen in three basic bonding elements, the emphasis on practice, the self-organization-disposition thought and the relevance of learning. The emphasis on practice requires effective action that delivers positive, usable results. Further to this, if competencies cannot be demonstrated competence reduction is the result on a long term perspective. The self-organization disposition is related to qualitative aspects like skills and knowledge as well as motivational skills such as motives, norms and attitudes. It also includes the element of self-directed solutions. The learning dimension covers the aspect of self-directed continuous extension of knowledge and ability.[189] With Eberl's model important aspects of willingness, learning and practice clearly emerge once again. These elements are comparable to the description of competencies by Erpenbeck and Rosenstiel. Their understanding of competencies incorporates a meaningful and fruitful action in open, complex, sometimes even chaotic situations that allow self-organization under theoretical and actual insecurity through self-accounting rules, norms and values. According to their model, competencies include skills, knowledge and qualifications, but cannot be reduced to it. Competencies additionally need the capacity to act in open unsecure complex situations based on self-made rules, norms and values. Therefore competencies are dispositions of self-organized action, including informal and self-organized learning.[190]

Based on the different definitions the following selection will be used for the research study. Competencies are the individual abilities and willingness needed to solve problems in variable, open, insecure and complex situations in a successful and responsible way. Competent action includes practice, self-organization and learning. Summarizing individual competencies the essential elements with respect to the research study can be divided into 'latent ability' and

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[188] HRK Hochschulkonferenz (2012), p. 14 original: Kompetenzen sind die bei Individuen verfügbaren oder erlernbaren kognitiven Fähigkeiten und Fertigkeiten, bestimmte Probleme zu lösen, sowie die damit verbundenen motivationalen, volitionalen und sozialen Bereitschaften und Fähigkeiten, die Problemlösungen in variablen Situationen erfolgreich und verantwortungsvoll nutzen zu können.' Competencies are cognitive skills, either existing or learnable, along with motivational and social willingness and ability to solve these problems successfully and responsibly in various situations.

[189] Eberl (2009), p.29, in the field of individual competencies she refers to Selznick (1957); Penrose (19959); Katz, 1974) and Kauffeld, 2000, p. 35

[190] Erpenbeck & Rosenstiel (2007), p. XI, p. VII, p. XIX, p. XX

'ability in use'. Abilities can be built on technical, methodical and social skills. They also touch on the aspect of knowledge and learning. In contrast the dispositional aspect focuses on motivational, volitional, and social willingness. Only when willingness' is involved is ability 'in use'. Consequently it can be assumed that in order to solve complex problems successfully, willingness is needed to transform ability into used competence. This is exactly what employee competence utilization (ECU) shall symbolize. As developed earlier, the individual competence perspective can generally be seen in the resourced based view as being defined by Barney.[191]

The individual perspective can neither be seen as isolated nor as organizational competencies which should be seen separately from the organizational perspective. On one hand organizational competencies are based on the same conception as individual conceptions, but organizational competence research adds another aspect to the picture. The unique combination and recombination of resources on a company level is seen to be a further aspect of the organization's competitive advantage.[192] This is an aspect which was developed earlier. As Penrose emphasizes the performance of resources has to be the central issue. This implies the quality of resources and their application.[193] This assumed, Eberl refers to organizational competencies as complex performance oriented collective routines in interaction with insecure contexts. In her model of organizational competencies Eberl specifies organizational competencies towards three dimensions: the cognitive, the practical and the affective. The cognitive dimension refers to 'sense models'. This dimension incorporates the organization's 'view on the world' and can be allocated in the field of organizational culture. The practical dimension refers to 'patterns of action' and is defined through collective, complex schemes of action. The affective dimension refers to creativity and motivation in insecure environments. Particularly the affective dimension reflects the aspect of willingness. Following Eberl's model four dominant factors are relevant for the contextual aspect of competencies. These are; social relationships, knowledge, intuition and emotion. Social relationships reflect on social capital (bonding and bridging social capital). The knowledge factor refers to the effective linking of resources. The intuition aspect describes, based on experience and sub-consciousness, the internal logic behind it. The emotional aspect is behavior orientated, based on value judgment and affective processes. Eberl further adds that organizational competencies are the result of rational (organizational decisions) and unconscious (intuitive and emotional) aspects dealing with

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[191] Barney (1991), p. 105. The view is directed at intangible personal resources arising from a complex social interaction, not easily imitable due to its social complexity.
[192] Eberl (2009), p. 59
[193] Penrose (2009), p. 22,32,33

environmental complexity and insecurity.[194] Obviously an important part of organizational competencies is the establishment of processes and the allowance of networks to utilize individual competencies; an aspect which must be valid from a strategic point of view. This is also the reason that Reinhardt and North position organizational competencies towards a strategic and process perspective.[195] As Pfeffer states, the common sustained advantage is based on how the companies manage their workforce. It is the organization, its employees, and how they work that is the crucial differentiating factor.[196] Taking this standpoint, it is of interest how organizational and individual competencies can be combined and therefore how strategic management may support the utilization of individual competencies.

There are a number of approaches that integrate organizational and individual competencies within organizations. Although the perspectives on competence management have different approaches, the general idea is to utilize existing competencies, to mobilize new competencies or even motivate employees to go beyond the boundaries of their jobs.[197] However the management tools proposed to achieve the mobilization of employee competencies vary. The target is either to synchronize individual and organizational competencies in order to better use employees' skills and integrate them into the company strategy (North and Rheinhardt)[198], or to align organizational core competence and individual job competence as well as balancing company needs with employee interests (Lindgren)[199]. Balancing the degree of overlap between the individual and the organizational environment (Erpenbeck and Rosenstiel) is a similar target.[200] Whereas North and Rheinhardt mainly touch on skills and abilities per se[201], Lindgren adds that only focusing on abilities' will not necessarily lead to competence in use. As a result organizations have to stimulate their employees' interest.[202] In addition Boyatzis postulates that the degree of overlap, the 'best fit' between the individual, his/her job demands, and the organizational environment can indicate effectiveness.[203] In order to achieve performance the target must not only be to establish the right competencies but also to utilize existing

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[194] Eberl (2009), p. 59,98,102,105,109
[195] Reinhardt & North (2003) p 1373(Prahalad and Hamel 1994; Freimuth 1997; Probst et al. 2000; Freiling 2001; Argyris and Schön 1996; Bellmann et al. 2002; Milberg and Schuh 2002; Reinhart et al. 2002).
[196] Pfeffer (2005), p. 96
[197] Bolzern-Konrad (2013), p. 80
[198] Reinhardt & North (2003) p. 1374, 1378
[199] Lindgren, Henfridsson & Schultze (2004) p. 468, 441
[200] Boyatzis, Goleman & Kenneth S. Rhee (1999), p. 14
[201] Reinhardt & North (2003), p. 1372, 1374,1377,1378
[202] Lindgren, Henfridsson & Schultze (2004), p. 438
[203] Boyatzis & Ratti (2009), p. 823, Model of Boyatzis from1982 and p. 14

competencies. With the notion of employees' interest and job demands Lindgren and Boyatzis single out the aspect of willingness as essential for the utilization of competencies.

Putting these reflections into a new picture applicable to the research study the resulting perspective should be seen as follows.
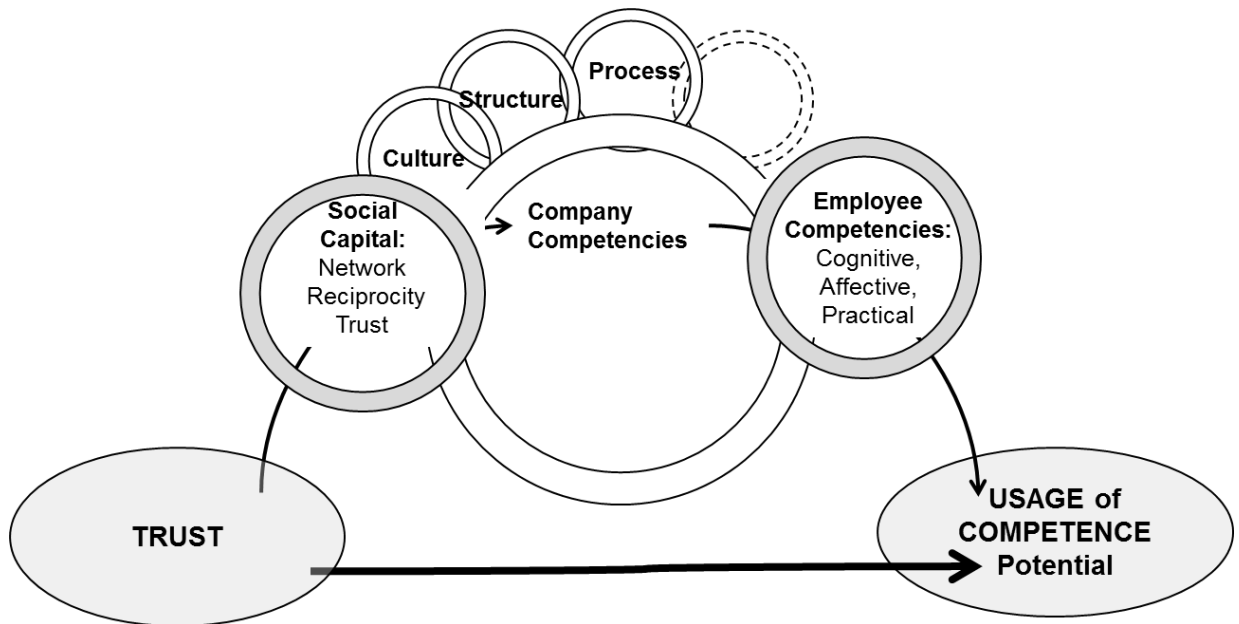
Figure 1. 7 Management of competencies – integrating the individual and organizational perspective

Source: Author's model

Organizational competencies include different aspects such as structure, process and culture but also the establishment of frameworks that support social capital. Individual competencies are also part of the organizational competence pool. The organizational ability to provide a culture of trust should lead to a utilization of individual competencies within one company. Utilized individual competencies in turn should increase the overall organizational competencies. At this point the concept of competence utilization has to be put into focus for further analysis. Furthermore the concept of employee competence utilization will be examined more closely focusing on the element of willingness.

1.4.2 REASONING THE SPECIAL VIEW ON COMPETENCE UTILIZATION

Like trust competencies are built through usage and furthermore generated by and through people. Prahalad and Hamel state in their research on core competencies, that unlike physical assets, which do deteriorate over time, competencies are enhanced as they are applied and

shared.[204] Further to this, competence degenerates on a long-term perspective, if it cannot be shown.[205] Eberl explains that the accentuation on action is a central element of the individual competence construct. In order to build and increase competences its actual practice and application is essential.[206] It is obvious that the utilization must be of vital interest to all organizations. As shown before competence-in-use is based on a sufficient level of ability, but necessarily needs the element of willingness as well. With the topic of this research in mind the focus is clearly made on the question of how competencies can be used efficiently. The core of analysis is not to question whether employees' qualification matches the requirements of the company as they have been selected competently and a basic competence level is seen to be given. Of course it is of importance to work on the fit of skills and job requirements continuously which however is not the focus of the research study. Rather the study is based on constant basic competencies with a focus on the efficient usage of one and the same meaning that the element of willingness is of central importance.

Hersey and Blanchard analyze the correlation of leadership styles and employee maturity levels. With the appropriateness of the leadership style according to the level of maturity of one's follower or group in mind, they explain that the amount of direction (task-behavior) and the amount of socio-emotional support (relationship behavior) has to be adaptable with regards to the individual employee. Although their model is focused on personal differences and the correlated appropriate responses of leaders, they also give an applicable explanation of the aspect of willingness. In their model they define the appropriate style as a function of the degree of task difficulty and the developmental level of the person doing the task. The maturity level of an employee equates to their development level. They further explain that the developmental level is the degree of competence and commitment a person has, to perform a task without supervision. With competence referring to the aspect of general given ability, commitment refers to achievement-motivation and willingness. The aspects of willingness and motivation touch especially on the idea of employee competence utilization given in the research study and should therefore be seen as an integral part of the concept. Based on the assumption that the level of ability is high, the target is to achieve a correspondingly high level of willingness too, resulting in high maturity. At this point Hersey and Blanchard suggest that the management should begin to reduce task behavior and increase relationship behavior to the point where the individual or group

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[204] Prahalad & Hamel (1990), p. 5
[205] Eberl (2009), p. 29, here she refers to Kauffeld, 2000, p. 35
[206] Eberl (2009), p. 29

is sufficiently mature. Subsequently management can decrease his socio-emotional support accordingly.[207] In this way both task and emotional support are needed in flexible ratios in order to stimulate maturity and with this also the level of willingness. Transferring these ideas to the trust concept relational and structural elements should be included and in doing so all employees can be addressed, independent of their maturity level. This is of importance as the research study does not take time effects and different personal maturity levels into account. Coming back to employee competence utilization and summarizing the influential aspects of the planned research model, the life-circle illustration shows the optimal position that should be reached with regards to willingness. Consequently this focus helps to specify the aspect of willingness of the research topic more precisely.

Further to this, Schmitz introduces another illustration reflecting the concurrence of motivation and ability. He comments that the power of willingness reflects the level of employees' energy output. Employees don't just do what they have to, but contribute to organizational success enthusiastically. The decisive question for management is therefore how to achieve that employees are willing to contribute to the success of the company [208] In order to answer this question Schmitz explains that the employee needs both the necessary skills and knowledge as well as an willing attitude. Ability and skills can be assessed mainly through employee selection and throughout the process of employee development. The element of willingness is essential in order to achieve the utilization of abilities and skills resulting in positive performance. Given these circumstances, Schmitz developed a matrix design resulting in four possible clusters; I cannot / I don't want to, I cannot / I want to, I can / I don't want to and I can and want to.[209] Basically he assesses the different clusters as follows; in case an employee who 'does not want to although he could' should not be tolerated by management. The same is true for employees that 'cannot and don't want to'. Certainly every employee needs the chance to receive training in order to be able to achieve the targets of the respective job. This is especially relevant as experience shows that employees dismissed for bad performance might be highly motivated under different circumstances. Nevertheless he stresses that insufficient performance should not be tolerated on the long term.[210] Consequently the clusters 'cannot but want to' and 'can and want to' are the ones who have the potential to achieve high levels of employee

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[207] Hersey & Blanchard (1974), p. 28, 29
[208] Schmitz (2005), p. 48
[209] Schmitz (2005), p. 51,52
[210] Schmitz (2005), p. 50, It might also be possible that it is promoting for trust if we allow not to do. This reflection will be done in the final discussion based on expert interviews

willingness. Schmitz emphasizes, that the willingness itself is dependent on the right organizational frameworks. At this point he refers to the necessity of a positive attitude towards human beings in general as well as to the necessity of a culture of trust. [211] Based on the assumption that most employees and managers are intrinsically motivated per se, adequate frameworks to avoid demotivation are more important than additional provisions. [212] In order to summarize the essential elements of the competence concept as well as specifying what is meant by employee competence utilization the following diagram is given.
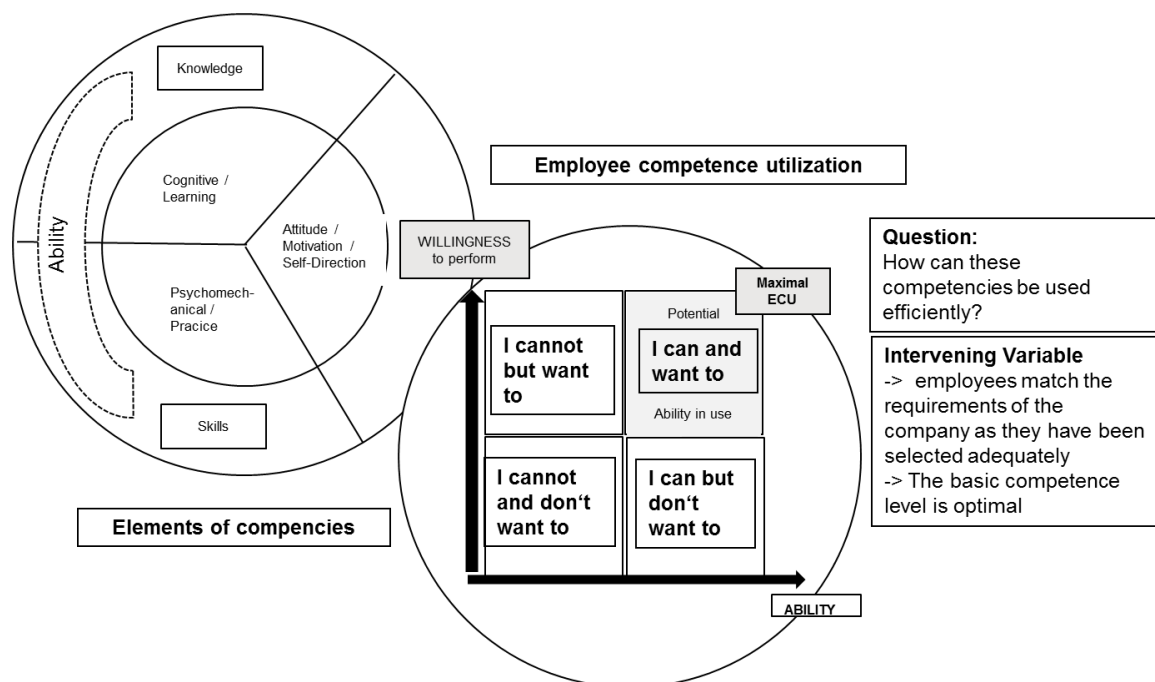
Figure 1. 8 The research concept of competence utilization

Source: Author's model based on Eberl (2009) [213]Hersey & Blanchard (1974) [214] and Schmitz (2005)[215]

The element of willingness builds the core for the utilization of employee competencies in this research study. Only if willingness is involved is ability 'in use'; certainly willingness alone is not enough. Skills and knowledge are similarly part of the competence concept. Thus, with the intention of focusing on the ability in use and based on the assumption that employees' qualifications match the requirements of the company as they have been selected adequately in advance and the basic competence level is taken as optimal. For this reason the concept of employee competence utilization used in this research study is part of the quadrant 'I can and I

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[211] Schmitz (2005), p. 43, see also Mc Gregor
[212] Schmitz (2005), p. 53, here he refers to Professor Dr. Rolf Wunderer and his publication from the University of St.Gallen 'Demotivation-Remotivation'
[213] Eberl (2009), p. 59
[214] Hersey & Blanchard (1974), p. 29
[215] Schmitz (2005), p.53

want to'. Further to this it is of importance that the concept of competencies necessarily implies performance. Competence is not demonstrated before a task is successfully executed. Consequently ability-in-use is the target and central description of the employee competence utilization concept.

2 CHARACTERISTICS OF THE MEDIUM SIZED MANUFACTURING INDUSTRY IN GERMANY, ITS RELATION TO THE CONCEPTUAL FRAMEWORK AND ITS DERIVATION TOWARDS THE INTEGRATIVE TRUST MODEL

Chapter 2 relates the research problem to the chosen conceptual framework. Applicable conceptualizations are analyzed and the respective industry specification is defined during the course of which its actuality and originality are reflected upon. Based on statistical data and information from other sources appropriate for the scientific research, a stepwise approach from the general context to the concrete contemporary situation is made. Supported by results of two pilot studies executed 'pre ante' to the main study in order to challenge the research approach and confirm its relevance, the context of the following main empirical study is prepared. Subsequently the author derives specific elements from the given conceptual framework and develops a new integrative model. With the successive verbalization of the research question as well as the definition of the respective hypothesis the second part is concluded.

2.1 ANALYSING THE FIELD OF MEDIUM SIZED MANUFACTURING ORGANIZATIONS AND POSITIONING THE RESEARCH SUBJECT WITHIN THIS INDUSTRY CONTEXT

In order to analyze the field and describe the general situation, the research problem framework needs to be compared with the situation in reality. By doing so, the choices to be made as regard to the empirical approach are be supported and defined more precisely. In addition to the general analysis of the field, this argumentation is enriched by the results of a pilot-study being executed 'pre ante' in order to illuminate the chosen context of business excellence and also give a strong argumentation towards the general relevance of the issue of trust within strategic management.

2.1.1 HIGHLIGHTENING THE ORGANIZATIONS' NEED TO RETAIN A COMMITTED WORKFORCE AND TO REALIZE EXISTING POTENTIALS

Headlines on challenges due to skilled-worker shortage, employee needs, global economy, demographic change, technological break overs and structural changes, and insecurity as the ordering principle characterize the existing environment characterize the existing environment.

They also show that the relevance of the topic of the research study can be approached from different angles.

The first angle is determined by the characteristics of a fast changing environment creating complexity and insecurity. Organizations are increasingly exposed to international competition. They need to react in fast, flexible and specific ways not only to survive in the short term but to ensure sustainable growth on in long run. The economic results of companies, their status, public image and success are essentially determined by the capabilities of their employees both from a personal and technical skill level. These employees, however, are themselves the product of rapidly changing society. National identities become blurred, the demographic ratio of young to elderly people is changing, ecology and long term future oriented thinking is prevalent while at the same time family structures are breaking down in favor of a higher degree of individualism. Values and individual goals change. One of the most blatant examples of these rapid changes can be seen by the changes in gender roles. On one hand people need to be more flexible and adaptable in their professional skills be prepared to change companies more often and need to keep up with fast developing technologies, even as commercial employees. On the other hand their personalities need to develop at the same pace. Jobs are ever more demanding for managers whose skills and leadership are subject to a fast changing environment. The developments described accelerate and lead inevitably to areas of tension and result in perceived insecurity. This is the environment in which organizations have to develop ways for a sustainable long term partnership with their employees.

As a second angle the aspect of skilled worker shortage has to be seen as a part of the industry environment. Long term company loyalty has gained importance in the light of a rapidly changing society and increasing skilled worker shortage, being one of the major future challenges of our community in the next 10 to 20 years, which is explicitly valid for engineers. This statement was made in McKinsey's study in 2011 directed at the issue of skilled worker's importance for competitive advantage in Germany.[216] In their survey on MINT-specialized employees in Germany Anger et al. state that in the next years we will see significant replacement need in this segment as a huge number of the employed academics is facing retirement age.[217] Also a study of the VDI as regards to the engineers employment market points out that in Germany especially the research orientated High Tech location in Bavaria and Baden Württemberg are in danger of shortage of engineers in an environment of low unemployment

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[216] Suder (2011), p. 6
[217] Institut der deutschen Wirtschaft Köln (2012), MINT = mathematics, informatics, natural sciencies, technique

rate. [218] This insight is underlined by the MINT study, further pointing out that especially small and medium-sized companies are focused on the German business model with its strong export orientation and comparative advantages the area of high tech products and technologies. Not surprisingly they state that the basis for this success is the technical know-how of highly qualified employees, especially in the MINT fields. The survey further evaluates relevant factors for the power of innovation and shows that the availability of innovative relevant skilled workers is of highest importance in the area of MINT know-how. A higher density of MINT academics relative to all employees induces a higher innovation orientation and leads to higher innovation success. They further state that 70,8 percent of all efforts in innovation is achieved by MINT intensive branches accounting for only 13,3 percent of all employees. MINT academics account for 5,9 % of all employees in Germany but create additional value of 10,9 percent, which is 1,75 times higher than average.[219] The reason for the higher additional value of MINT academics is to be seen in higher productivity (measured in earnings per hour) and longer working hours.[220] In another VDI study directed at the demographic replacement need, Koppel even points out that the shortage of engineers led to a loss of added value of 98.100 € per head in 2009 and is going to increase.[221] The loss of added value is also reinforced through flexible employment in times of severe demographic changes. In her research study Preißling points out that the demographic change features an aging workforce, an absolute declining number of people in work and a dramatic scarcity of junior employees.[222] Therefore one of the key demands is profiting from knowledge and skills of existing employees throughout their whole work career. Ramlall also comes to the conclusion that there is a significant economic impact when an organization loses any of its key employees, especially given the knowledge that is lost with the employee's departure.[223] Another aspect is that the turnover rate in general has an enormous cost effect on companies. As Curtis and Wright state the cost effect in binding people becomes visible in terms of work efficiency and synergies.[224] This is because the process of replacing an employee is costly and replacements seen to be more cost effective than the average annual salary. In their article on social capital via leader-member exchange Stark and Jeffries arise that further to the

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[218] Berends (2012), p. 3, VDI = **V**erein **D**eutscher **I**ngenieure / Association of German Engineers
[219] Institut der deutschen Wirtschaft Köln (2012), p. 3-6
[220] Institut der deutschen Wirtschaft Köln (2012), p. 14
[221] Koppel (2010), p. 32
[222] Preißling (2011), p. 38
[223] Ramlall (2004), p. 52, Review of employee motivation theories and their implications for employee retention within organizations
[224] Curtis, S., Wright, D. (2001), p. 12

cost in replacing departing employees an even greater cost may be found in the uncompensated performance differential between employees who leave and their replacements. This is because employees with substantial amounts of firm-specific human capital can be replaced by workers with less firm-specific human capital. Stating this they also subsume that employees that demonstrate greater intention to remain with their employer can be assumed to have greater potential for contributing to a firm's human capital than employees with less intention to remain.[225]

It becomes obvious that not only hiring capable people is attractive, but also building and sustaining a committed workforce - an aspect especially valid in times of skilled worker shortage. In conclusion, it is not only costly to loose skilled employees; it is also difficult to replace this valuable resource in the short term. In this way it is of strategic importance to provide frameworks that allow a sustainable long term partnership. Therefore in order to gain the necessary commitment from their employees managers have to be aware that the offer of meaningful goals is decisive in unfolding their abilities. As Drucker states: 'People are not satisfied with being helpers.' 'They are knowledge workers in the jobs in which they earn their living. And they want to be knowledge workers in the jobs in which they contribute to society; that is, their voluntary work. If non-profit making organizations want to attract and hold them, they have to put their competence and knowledge to work'[226] Also Becke points out that it is important to realize that employees have an evident demand towards their own professionalism.[227] The professionalism in turn can only be shown if available abilities can be exploited. Employees are not expected to move the pencil from left to right in the company whilst building their own house without any help in their free time. The essential challenge for managers and leaders in the 21st century is to unfold the cognitive abilities of its organization. [228] In order to contribute to the question of how this can be achieved, the research study assumes that it should not just be a monetary goal but also an immaterial cultural target of establishing a positive attitude towards its own employees and provide an atmosphere of trust. Putting it into Jessica Pryce-Jones's words, 'trust is a resource that doesn't cost money; but low trust has a high

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[225] Stark & Jeffries (2011), p. 125, here they refer to Cascio and Boudeau (2008) and Heneman & Judge, (2009)
[226] Drucker (2001), p. 47, To be added here these basics are needed for profit organizations too
[227] Jammal (2008), article of Schweer, p. 19
[228] Schmitz (2005), p. 48 referring to Warren Bennis, University Professor and Distinguished Professor of Business Administration and Founding Chairman of The Leadership Institute at the University of Southern California; Bennis promoted humanistic, democratic-style leaders as he thought they are better suited to dealing with the complexity and change that characterize the leadership environment.

price, everyone pays for it.'[229] As shown before, trust and employee competence utilization are an informal immaterial resource that is free from monetary compensation both of which grow with usage. In addition to this and as shown before these are resources that are directly incorporated in people and their interactions. The structure of cooperation between people provide a competitive advantage that is not or at least difficult to copy. Following this argumentation it is of relevance to find adequate ways to establish an environment of trust in order to promote competence utilization. Whilst there are a variety of studies in place regarding trust, there is no conceptualization available integrating trust base action into the concept and furthermore linking the concept of trust to the variable of employee competence utilization. There are few papers in place reflecting the correlations between trust and business excellence systems. Finally, as to the knowledge of the author, no paper has been gathered an integrative perspective on trust and employee competence utilization within the business excellence environment.

2.1.2 SPECIFICATION OF INDUSTRY CHARACTERISTICS AND DEFINING THE SELECTED SEGMENT

This research gap is situated in a particular industry. It first has to be identified what this industry looks like. A specification of the region, which type of industry, and which branches is made. Arguments for contextual placement of the research study within the business excellence context shall also be given.

The research study is directed at medium sized organizations in the manufacturing industry in Germany and the business excellence context. As stated in the European Commission's report, small and medium sized enterprises (SME) are the motor of the European industry. The report points out that SMEs essentially promote the innovative activity within the European Union and with this play a decisive role regarding competitive advantages and employment. In January 2005 a new definition for SME was established. [230] According to the European Commission's definition all companies that have fewer than 250 employees and either a yearly sales volume not exceeding 50 Million Euro or a total assets amounting to a maximum 43 Million Euro are categorized as 'small and medium' sized. The limits based on the European Union specifications are shown as follows in comparison to the specific size limits published by the institute for medium sized businesses.

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[229] Pryce-Jones (2010), p. 156,
[230] Europäische Kommission (2006) p. 3, SME = Small and Medium Sized Enterprises correlate to the German Term KMU = Klein und Mittelständische Unternehmen

Table 2. 1Definition of small and medium sized enterprise – based on the European Union and the institute for medium sized businesses

European Union						Institute for Medium Sized Businesses (ifm)			
Company size	Number of Employees	and	Sales in € per year	or	Assets amount in €/year	Company size	Number of Employees	and	Sales in € per year
Very small	up to 9		up to 2 m€		up to 2 m€				
Small	up to 49		up to 10 m€		up to 10 m€	Small	up to 9		up to 1 m€
Medium	up to 249		up to 50 m€		up to 43 m€	Medium	10 -499		up to 50 m€
						Big	500 and more		50 m€ and more

Source: Author's table based on European Union [231] and ifm [232]

With reference to the table a company is categorized as medium sized if the number of employees exceeds 49 and is lower than 250. The company also has to be independent meaning that less than 25% of its shares are held by another company group. The aspect of independency is also included in the definition of the Institute for Medium Sized Businesses (ifm) in Germany. However the ifm, as opposed to the definition of the European Union defines a medium sized company in the range of 10 and 500 employees.

The quantitative definition delimits from the European Union definition in defining wider boarders for medium-sized companies. They state that this group of companies employing between 10 and 500 employees accounts for 99,6 percent of all German companies in free-market economy and supports 55 percent of the total economic power of all German companies. [233] As opposed to the other European countries the term 'medium-sized' is precisely outlined in Germany. Further to the wider limits, the ifm goes beyond the pure quantitative approach with its definition. Not only are social and psychological aspects taken into account besides pure economic ones, but also qualitative elements are included in the definition. As the 'ifm' specifies, these aspects are included as they are explicitly important to understand motives, evaluations and

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[231] Europäische Kommission (2006) p. 3, SME = Small and Medium Sizded Enterprises correlates to the German Term KMU = Klein und Mittelständische Unternehmen

[232] Institut für Mittelstandsforschung Bonn (2003) p. 1, 14 ifm = Institut für Mittelstandsforschung / institute for medium-sized businesses

[233] IMF Flyer (2013), p. 1, The different definition of limits is not only of interest as to the limitations of the research study, it also impacts a company's chances to gain promotional programs targeted to research and development for example.

determinations of conduct. [234] As a consequence two different definitions have to be touched on in order to outline the situation in Germany. In addition, to the widened view on the quantitative numbers, the qualitative supplement emphasizes that management responsibility takes a prominent position not only in the ifm definition. The National Bank of Germany points out in its research paper that the isolated quantitative view on SME companies does not give a differentiated picture of the company structure in Germany. They attach importance to the fact, that bigger family firms should be considered too as it is these that shape the company landscape. Family firms, though, cannot be defined based on the number of employees or the level of sales and therefore are not explicitly analyzed based on the quantitative statistics. Instead qualitative attributes like owner structure and specific company culture should build the focal point. [235] Like the qualitative definition of the ifm, this perspective underlines the close connection between the organization and the owner. The closeness of the connection is documented in the unity of ownership, management, financial responsibility and risk as well as in an accountable contribution to all decisions relevant for the company policy. The important argument with respect to a company grouping which makes sense is therefore that management has a direct impact on all decisions and processes of strategic importance. Furthermore autonomy from the corporate group has to be complete or at least extensive.[236] Taking this standpoint family firms are characterized especially by outstanding engagement and the value mindset of the owner family. As to the results of the National Bank investigation, these companies build on sustainability, motivation, closeness to customers, innovation, flat hierarchies and fast decision processes. With regard to the research study it is of interest that small and medium sized enterprises and family businesses do have strong overlaps. According to the report 90 percemt of all very small companies are family owned, but also bigger companies with more than 500 employees are family owned in 25 percent of all cases. The 500 top sales family owned firms contribute 17 percent of the total German sales.[237] Furthermore the research study of the Federal Bank of Germany illuminates that this group is very much the motor for income and employment generation in many places as they are often the main employer. Beyond this, two thirds of the TOP 500 family firms are concentrated in the federal states of Nordrhein-Westfalen (137),

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[234] Institut für Mittelstandsforschung Bonn (2003) p. 1 here they refer back to Ludwig Erhard 1956: If we only understand the medium-sized companies from the material perspective …then the term is misleading
[235] Bräuninger (2013), p. 4
[236] Institut für Mittelstandsforschung Bonn (2003), p. 2
[237] Bräuninger (2013), p. 5 he further states that 90% of the SME companies reach a sales figure of less than 1 Mio. Euro per anno.

Baden-Württemberg (105), and Bavaria (93).[238] Taking into account that the family businesses account for the most important and attractive sector in the German industry landscape they should be included into the spectrum of companies chosen to be relevant for the empirical study. However, with the intention of excluding big companies, the selection of family businesses being involved should be restricted to those with up to 1000 employees. Companies with employees between 500 and 1000 employees are by no means big companies but are not covered within the narrow band of definition for small and medium sized companies. As to numbers of the National Department of Statistics 3.304 companies with 2,2 Million employees fit into the category of companies with 500-999 employees. [239] A majority of these companies are expected to be family firms as well as fitting into the qualitative definition of medium-sized companies. In this way they have both the SME characteristics and incorporate the opportunities of medium sized family businesses. For further details see Appendix 1.

As a result companies with up to 1000 employees will be integrated into the research study. For the lower limit restrictions have also been considered. Companies involved in the empirical study should offer a critical mass of employees, a minimum 50 employees. Consequently 1,9 Mio companies that don't have any employee and a number of 1,4 Mio companies that have less than 10 employees have been excluded from the research study.[240] Following this argumentation and with regard to this overlap in definition and qualitative specification, the main unit for the empirical study is built on a spectrum of medium sized companies with between 49 and 999 employees. This segment represents roughly 2 percent of the total company community, but is represents 40 percent of all employees and sales.[241]

Along with the qualitative definition of the ifm and the specification of family businesses the research study targets the segment of privately owned or capital companies. 1,1 Mio of all companies are private or capital companies, whereas 2,3 Mio companies are sole proprietor owned. The focus of this study targets purely the private or capital company's segment. As a result the research study brings together family and medium sized companies which are private or capital owned into a cohesive picture.

Touching on the different branches involved in the entire German market roughly 10 percent of all companies account for the manufacturing segment. Other branches such as energy

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[238] Bräuninger (2013), p. 7
[239] Statistisches Bundesamt & bmi (2014), based on a table build on data from the National Department of Statistics/Statistisches Bundesamt, prepared by the bmi specifically on request for the research study
[240] Statistisches Bundesamt & bmi (2014), table national department of statistics
[241] Statistisches Bundesamt & bmi (2014), table national department of statistics

supply, transport, trade, construction business, the hotel and restaurant industry, health and insurance, to name but a few, are not involved in the study. The selection of the industry segment the study is directed at is shown below.

German Companies - all branches 2012: Total No of companies: 3,663 Mio Total No of employed people: 26,9 Mio Total Sales in 10000 €: 6, 096 Mrd	German Companies - manufacturing only 2012: Total No of companies: 0,25 Mio Total No of employed people: 6,7 Mio Total Sales in 10000 €: 1, 096 Mrd **FOCUS: Manufacturing Branch = 10% of all**
Number of companies of all branches per number of employees contributing to social insurance: Total No of companies: 3,663 Mio Companies with 0-9 Employees: 3,33 Mio Companies with 10-49: 0,264 Mio Companies with 50-249: 0,056 Mio Companies with 250-449: 0,007 Mio Companies with 450 – 999: 0,003 Mio Compamoes with 1000 and more: 0,002 Mio	**Companies with employees between 50-999 employees contributing to social insurance** **FOCUS: 49-999 employees = 0,067 Mio** **= 2 % of all** Companies with 50-249: 0,056 Mio EU ifm family business Companies with 250-449: 0,007 Mio Companies with 450 – 999: 0,003 Mio
Legal Status of Organizations of all branches per number of employees contributing social insurance: All Companies: 3,6 Mio Sole proprietor: 2,3 Mio Private Companies: 0,45 Mio Capital Companies: 0,65 Mio Others: 0,21 Mio	**Private and Capital Companies:** **FOCUS: Private and Capital Companies = 1,1 Mio** **= 30 % of all**

Figure 2. 1 Industry segmentation – companies between 50 and 1000 employees

Source: Author's collection based on ifm[242] and the National Department of Statistics [243]

Based on the described selection criteria 67 million companies fit into the definition of medium-sized companies relevant to this research study. According to the figures applicable to the whole German market, 30 percent of all companies are private or capital owned and 10 percent are positioned within the manufacturing segment. These numbers are intended to give an indication of the size of the industry segment chosen as a basic frame for the research study. But even more important is the qualitative characteristic of the chosen segment. Succeeding the pure quantitative approach the issue of independence and the accountable contribution to all decisions relevant for the company policy is decisive. This is because, positioned in this particular industry segment; the company selection for the subsequent empirical study is based on a pure qualitative selection approach. For this approach it is important that the research study is positioned in the business excellence context. As shown in the theoretical section, there is a variety of terms and different systems on the market. What is more there is no compulsory registration of companies

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[242] IMF Flyer (2013), p. 1 http://www.ifm-bonn.org/mittelstandsdefinition/definition-kmu-der-eu-kommission
[243] Statistisches Bundesamt & bmi (2014), table National department of statistics

as one specific norm. Further to this a huge number of auditing companies are available, each of them monitoring just small parts of the market. As a consequence there are no reliable numbers available showing how many companies in Germany work with a quality system under the theoretical umbrella of business excellence. In trying to approach this issue though from a qualitative perspective, the following considerations shall be made. As shown, different motivations are in place when deciding whether to implement a quality system. One goal is to increase the performance of a company in order to remain competitive. In the ideal case this decision goes along with a strong belief in and clear passion for an existing culture. The fulfillment of a requirement made by a powerful customer might be another reason; a situation companies are naturally confronted with in branches of industry where high quality standards are required such as the automotive industry and the medical industry. Of course products intended to be delivered in safety or human applications have to comply with high standards. The supplier to such an industry does not have much leeway in deciding whether or not to implement the respective system. It is simply a condition of 'sine qua non'. But also in this case, the general underlying idea can be seen as the safe-guardinging of standards and the achievement of performance. Thus, continuous performance achieved by the supplier and used and advanced by the customer, is the target. All branches of the manufacturing industry are touched by this issue. The main branches and their share of the processing industry are listed as follows.
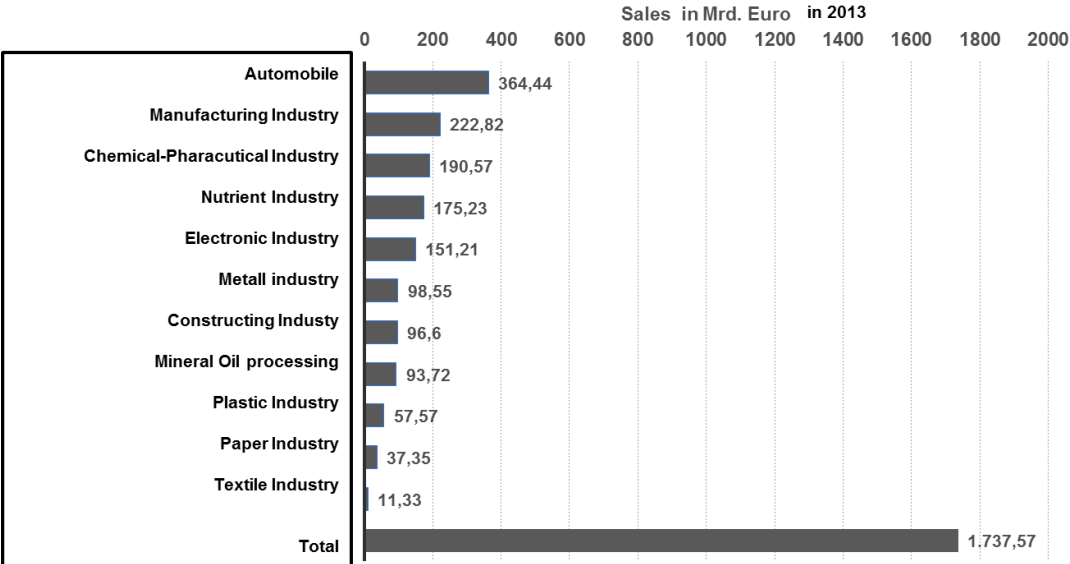
Figure 2. 2 Main branches in the processing industry

Source: Author's figure based on the National Department of Statistics[244]

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[244] Statistisches Bundesamt & VCI (2014), Main branches in the processing industry despite mining

As to the National Department of Statistics's numbers the manufacturing and automotive industries are the two biggest branches in Germany based on mrd Euro Sales in 2013. Complementing this, the Center for European Economic Research states that in 2009 the German automotive industry was the second biggest employer following mechanical engineering. [245] The VDMA report shows that the German mechanical engineering sector contributed significantly to the growth of the German economy, being one of the largest sectors in the industry. They further state that the machinery and plant engineering industry is the largest industrial employer in Germany. According to the report, mechanical engineering ranks first in terms of number of companies and number of employees and is second only to the automotive industry with regard to sales. [246] Besides these two big sectors, basically all branches within the processing part of the manufacturing industry are of equal relevance. As shown before, all branches are confronted with the need to fulfill high level quality requirements in order to be seen and accepted as qualified supplier. The automotive industry is by nature directly confronted with these requirements, delivering in safety applications. The medical industry also has to accept high level quality demands, aside from compliance to comprehensive, regulatory validation processes. Mechanical engineering, being the paragon of German industry, as well as the automotive sector has to fulfill its reputation as being world class. Quality nonconformance can be accepted by no means. Not at least in order to reciprocate to the strong international competition all branches have to implement quality systems that enable them to build their own competitive advantage. Consequently companies of all branches of the processing industry are confronted with similar requirements as regard to business excellence. [247] As a consequence there are no restrictions to the branches, within the field of manufacturing industry, relevant to the approach of the research study.

Admittedly, high standard quality systems are to be expected in all branches. High quality systems necessarily require high standard employees. As shown before, the skilled worker shortage is a serious issue in this context. At this point the circle closes again and supports the relevance of the topic for all parts of this particular industry segment. It is not under discussion that high standard fields are explicitly exposed to bottlenecks in the segment of engineers in

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[245] ZEW (2009), p. 61, Zentrum für Europäische Wirtschaftsforschung / Center for European economic research
[246] VDMA (2013), p. 6, the numbers refer to the Statistisches Bundesamt, VVE, VDMA=Verband Deutscher Maschinen- und Anlagenbau (Association of German machine- and plant engineering)
[247] Bolzern-Konrad & Sumilo (2014b), p. 1131. As it is shown in the progress of the research study the fields of medical, metal, furniture & household appliance, and telecommunication have been chosen based on a purely qualitative selection approach.

mechanical engineering and automotive techniques. A report made by the Federal Bank of Germany and the Federation of German Industries (BDI) illuminates indicators of skilled worker shortage in companies with up to 1000 employees; a segment specifically chosen for the research paper study. Important indicators are named as being the number and duration of unfilled positions in companies. 29 percent of these companies had difficulties to filling vacancies within two months. Not only academic but also industrial technical professions are in focus. As to the study it is not easy to say, whether bigger or smaller companies within this range are more strongly impacted by this effect. On the one hand bigger companies are pretty well-known also on the international level which opens up opportunities of recruiting international employees. At the same time bigger companies are confronted with higher fluctuation. Medium-sized companies, on the other hand care for their own young academics as a matter of course. As a consequence the affiliation to a specific branch and location might be of greater significance than the size of the company. Especially companies in information technology, high-technology sectors and health industry need specific attention. Rural areas fall behind compared to dynamic regions with lively demand. Consequently the report illuminates the need for sustaining employee loyalty and commitment. As previously stated not only is recruitment decisive but also the reputation of the company throughout the employee's period of employment. Based on an empirical study executed by the Foundation of Family Firms in 2011, employment behavior and immigration are named as the two important variables for the competitive advantage of companies. Aspects of good working atmosphere and self-directed work do rank highest among factors of influence as regard to the selection of the respective employer.[248]

In summary, the industry specification of medium-sized companies in a range of 50 to 1000 employees in the manufacturing industry targets a group of companies that are directly confronted with employee issues and the sustainable exploitation of their full potential. This issue is of importance for all branches in the processing industry which have business excellence demands. Being directed at this particular context the research study makes the assumption that long term sustainable commitment and bonds to the company are directly connected with the ability of the company and its respective managers to establish an environment that realizes the

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[248] Bräuninger (2013), p. 10 ff the numbers are referenced to Institut der Deutschen Wirtshaft (Hrsg.) 2012 MINT.-Herbstreport 2012: Berufliche MINT Qualifikationen stärken, as well as BDI =Bund der Deutschen Industrie/Federation of German Industry and Deutsche Bank (Hrsg.) 2012: Die größten Familienunternehmen in Deutschland – Daten, Fakten, Potenziale, Ergebnisse der Herbstbefragung 2012, they also refer to Stiftung Familienunternehmer (Hrsg.) 2011,: Attaktivität von Familienunternehmen als Arbeitgeber. Eine empirische Untersuchung der Sicht junger Akademiker; Bearbeitet vom Wittener Institut für Familienunternehmen (Study between 2008 and 2011 on the recuiting fair among 465 employees)

abilities of its employees. Before opening up the field of the research model development and assuming that a culture of trust is the adequate instrument, results of two studies executed 'pre ante' to the main empirical study are shown.

2.1.3 INSIGHT TO THE RESULTS OF TWO EXPLORATIVE PILOT-STUDIES PROVIDING ACCESS TO THE CHOSEN INDUSTRY SEGMENT

In order to further clarify the basic idea behind the research study with experts and to prepare the model resulting from the comprehensive literature study, two studies made with experts in the field. Based on an explorative approach 'pre ante', two considerations played a role. First the pre-study was intended to reinforce the hypothesis of the research paper at hand. Second, this approach is furthermore seen as an additional reinforcement of the relevance of the topic for the research field.

This first entry to the field was made in a 'pilot' expert interview, executed between July and August 2013 in advance of the final operationalization of the model. The intention was to elaborate the role of trust in strategic management as well as to challenge the placement of the trust, competence correlation within the business excellence setting. This was done with respect to the expected mutual basis between the value of trust and the philosophy of business excellence. These pilot interviews were executed with 6 representatives of companies and institutes dealing with business excellence. All of them are in leading positions in their respective companies or institutes and all have extensive background in strategy and business excellence. For list of interview partners see Appendix 2. The research design is based on a semi-structured expert interview.[249] The intention of the interview was to gain knowledge in an individual structure and a face-to-face setting in order to gain a combination of soft and hard facts related to the experience of the expert. The kind of question was mainly open but some standardization was provided by a semi-structure so that answers could be given in a restructured form.[250] The duration of the interviews was 1-2 hours. The experts placed great importance on culture, trust and resources within strategic management. Comments were made with regard to a necessary fit of organizational structure and philosophy. Also the value of soft issues was underlined, as these are more difficult to develop and much more time consuming than hard facts. Also social capital and trust were seen as a common concept. In addition to the suggested options other important

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[249] Mieg & Näf (2005), p. 7 An expert is seen as a person who has profound knowledge and many years' experience and competence in the area.
[250] Lamnek (2005), p. 331

parts of strategic management were named like: leadership, communication, policy deployment and key performance indicator (KPI) management. The aspect of trust was evaluated as playing a central role within the strategic context, being connected to leadership and goal directed management. In order to prepare a situational approach intended to be tested in the main empirical study different trust scenarios were addressed. This was done with the intention of making deeper inroads into the aspect of trust and to meet concerns regarding the discussion of whether trust can only be measured from an analytical perspective or needs to be challenged through a descriptive perspective. In order to develop these scenarios experts were asked to describe or name situations in which trust becomes visible. As a result experts mentioned the high importance of decision situations and the acceptance of discussions to make trust visible. They furthermore evaluated the aspect of work efficiency in the absence of the direct leader as a good indicator for trust environment. Also the importance of delegation was named in line with the leeway to make decisions autonomous. One of the central questions was, 'Is the mission of strategic management the creation of mutual trust?' Answers referred to the impact of trust on satisfaction and happiness at work. A high level of trust was also related to the absenteeism rate of employees. The positive impact of trust on using competence potentials was also commented on. Further to this it was stated that trust might increase self-disposition positively and increases the basic readiness of employees to perform. At this point it was commented that the hierarchical and education level of the respective employees may lead to different requirements regarding trust and may also lead to different evaluations. It was further mentioned that trust has to be seen as a stepwise process which is connected to reliable leaders. As a result it was stated that 'the higher the freedom of action the higher the resulting commitment.' Another expert point was directed at trust as a continuous enhancement process, a circular process as the creation of trust is expected to promote the utilization of potential which in turn increases the trust level. Touching on the business excellence aspect the experts were asked if there is a system in place that acts as an umbrella over all systems. Besides the fact that all experts evaluated their own system as being the best umbrella, the majority of the interview partners suggested that the business excellence approach is the most suitable perspective. The argument supporting this choice was that business excellence is strongly connected to the EFQM model which addresses the strategic aspect in the best possible way. Further to this it was seen as the most logical concept with regard to the topic of trust and employee competence utilization. Asked about a possible mutual basis common to the concept of trust and the philosophy of business excellence the following elements were

chosen for both concepts; reduced complexity, empowerment, reliable practices, shared values and absorbance of insecurity. The aspect of leadership was also evaluated to play an important role with regard to a framework of trust. Influenced by personality and socialization, leadership can either make use of the tools of a business excellence system but also may be supported by the system in its own development of leadership maturity. There are two reasons for this. First, the system itself requires trusting behavior in order to be effective in terms of continuous improvement processes. Second, direction inherent in the system may support the development of developing leaders until they become experienced. As a result the first pilot study which supported the assumption that trust is one aspect of a variety of aspects being important in strategic management, supported a strategic approach to the topic of the research. Trust is seen as the fundamental to and active in the framework along with other factors; only the range of other factors is seen differently. The mutual basis between trust and business excellence is predominantly seen in a framework that allows empowerment of employees. As a consequence the pilot-study was valid to check the best way to prepare and execute the subsequent expert interviews and questionnaires for the main empirical section. Two aspects were of major relevance though. It turned out to be very valuable to choose a personal approach towards the companies, which is a message relevant to the main empirical study. This is especially important as the main empirical study is much more comprehensive and requires time, effort and openness of mind for non-foreseeable results. Management processes like business excellence shape behavior and philosophies impact all aspects of company trust and company competencies. As a result the general plausibility of the topic was underpinned by the different experts.

In a second 'pre ante' approach a questionnaire was directed at a group of business excellence experts in March 2014. The intention was to develop an idea on how these experts rate the importance of trust and the aspect of employee competence utilization in general and within a business excellence environment. The questionnaire consisted of closed questions, which gave indications to participants of how to answer and how many answers were possible for the same question. The questionnaire was to be answered in a reasonable time frame of 15 minutes. This study also was intended to clarify the main terms of this research as well as challenging its relevance and actuality. In line with the selected industry field, the target was to approach the highest possible number of experts in the field of business excellence, representing companies from all branches and regions in Germany. For this reason the Total Productive Management Congress in Cologne 2014 (Management Circle AG, 2014 / CETPM Ansbach, see also Appendix

2) was chosen for the survey. With this a considerable selection of experts in Germany could be pooled and as a result a valuable evaluation on important aspects within the business excellence field was to be expected. The survey was introduced personally in the course of the congress as the possibility for a short introduction to the audience was given. The questionnaire was presented in a one pager paper version and placed during the conference. The analysis of the respective answers was done anonymously. In total 60 experts attended the conference, 35 of those replied to the questionnaire. On request results have been provided to the participants. The participants' experience in the field of business excellence was pretty high as 40 percent of the participants had experience in the field for more than 10 years. Branches were widely distributed. (dairy, packaging, chemistry, cosmetics, steel & aluminum manufacture, food, pharma, agricultural engines, medical engineering, semi-manufactured products, mechanical engineering, household water filter, automation engineering and automotive industry as well as automotive component suppliers) As regard to quality systems being implemented, the majority of all companies had total productive management (TPM) or lean management in place, followed by Kaizen and operational excellence (OE). Those systems fall under the umbrella of business excellence based on the definition of the research study. When asked, 'From your perspective, which are the most decisive elements for a business excellence system', the answers showed high scores for all elements, but the aspects of continuous improvement processes as well as the focus on the employee ranked highest. This result was in line with what the managers in the pilot interview had stated. When asked, 'Which fields of a business excellence system are most important with regard to a culture of trust?' the field covering the fairness aspect ranked highest directly followed by the element of clear goals and continuous improvement. In order to evaluate important indicators for trust and employee competence utilization, the experts were asked for a ranking of indicators. The answer was clear. With regard to trust the experts gave the highest scale number to 'clear goals' followed by 'fairness' and 'delegation level' ending with 'network structure'. With regard to employee competence utilization they took the position that the 'satisfaction level' should have the highest scale, followed by 'productivity' and 'over obligatory performance'. They evaluated retention of employees with the lowest scale number. Trust specific situations, which had been evaluated throughout the pilot expert interview, were offered to the business excellence experts for evaluation. As a result their evaluation of situations with regard to their appropriateness for showing a culture of trust provided a ranking which was applied to the main empirical study.

To summarize the results, the aspect of taking responsibility is very important for the business excellence experts with regard to values within a business excellence system. However trust and team spirit are also evaluated to be essential within a business excellence system. The focal point of business excellence systems is the aspect of continuous improvement as well as the central focus on employees. The experts are further of the opinion that a trust culture is mirrored mainly in the allowance of and respect for constructive criticism. Furthermore they see a trust culture mainly represented by the freedom in decision making situations and the handling of failures. Here again the strategic importance for a trustful culture becomes obvious. These results constitute a valuable input to the development of the research model. Further to the placement of the topic in the particular industry segment the specific organizational context is to be approached.

2.2 SPECIFICATION OF THE CHOSEN CONCEPTUAL FRAMEWORK WITH RESPECT TO ITS INTEGRATION INTO A NEW INTRA-ORGANIZATIONAL MODEL ON TRUST

The conceptual framework shall visualize the researcher's map of territory being investigated. [251] It defines the edge of the case, what will not be studied and it leads to the 'heart' of the study, showing how the approach to the problem looks. [252] As shown before the view on the different elements of organizations builds the frame for this research study. Within this research study the focus is made on intra-organizational correlations. The correlation of trust and employee competence utilization is analyzed with a special view on the relationship between employees and the respective manager within the institutional system. Neither trust between different organizations nor trust of customers is part of the chosen research area. And so the topic of the research study is analyzed on the micro level with meso elements involved. The figure below provides a picture of the chosen conceptual framework of the research study. [253]

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[251] Miles & Huberman (1994), p. 18
[252] Miles & Huberman (1994), p. 25
[253] Bolzern-Konrad & Sumilo (2014a), p. 68, the theoretical framework has been published here
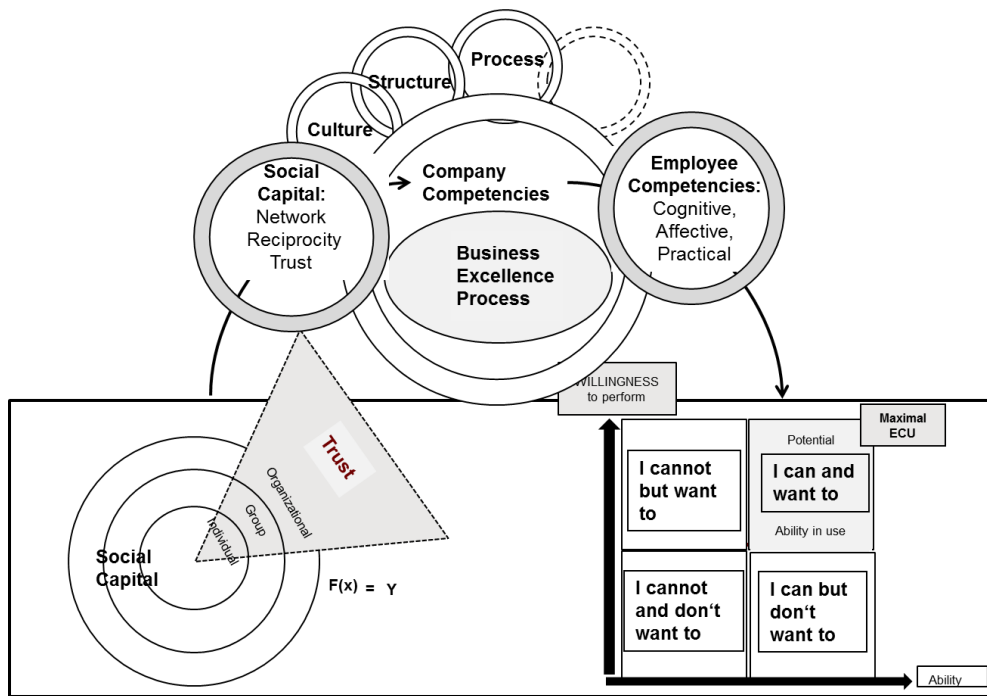
Figure 2. 3 The conceptual framework of the research study

Source: Author's model

As shown in the diagram the intangible resource of trust and the intangible resource of competence (ECU) are brought into focus. Based on the literature review as well as on the results of the first pilot studies the assumption has been made that the concepts of trust and competencies are a valid basis for successful organizational work although they are taken out of a bunch of other elements which are part of internal organizational work. Consequently the other elements are not under research. However the context is embedded in an external environment, characterized by competition, technological development, new substitution products in the field, to name but a few. Also internal factors besides the resource of social capital have influence on intra-organizational correlations. Here the qualification level of employees as well as other resources like technology, the structure of the organization and the systems in place should be named. Within this framework the study's general objective is to examine the impact of the indicators of trust on the indicators of employee competence utilization. Strategy is important in order to consolidate the resource trust with the resource of competence. Positioned in the strategic context, the framework also reflects the question of how strategic management can realize the impact of trust on employee competence utilization and how this can be measured. The intention is to visualize the research outcomes in a balanced scorecard scheme. Having been developed in the theoretical section, following definitions have been chosen for the research study.

Table 2. 2 Definitions used in the research study

Business Excellence	Business excellence is the chosen umbrella perspective on quality management comprising all aspects of corporate management and based on a strategy approach. Major chosen aspects are: 'leading with vision and integrity' as well as 'succeeding through the talent of people' relating to the standards of the European Foundation of Quality Management (EFQM). (Author's definition based on EFQM 2012, Friedli 2013)
Social Capital	Social capital is seen as investment in social relations based on the assumption that the other person or institution justifies trust and in return probably acts reciprocally. In return the investment opens opportunities to use and activate resources otherwise not available or available at greater cost. (Authors definition based on Lin (199), p. 30, Adler (2202), p. 23, Baumane (2007) p. 72, Haug (1997), p. 16-23)
Trust	Trust derives from relationships and is defined as the willingness to be vulnerable in a complex uncertain situation dependent on another person. It is based on a positive expectation on mutuality and results in risk taking decisions and action. The trust-based-action implies the potential to realize unused resources. (Author's definition based on Luhmann (2014), p. 38)
Competencies	Competencies are the individual abilities and willingness needed to solve problems in variable, open, insecure and complex situations in a successful and responsible way. Competent action includes practice, self-organization and learning. (Author's definition based on ERK, 2012, Erpenbeck, 2007, Eberl, 2009).
Competence Utilization	Competence utilization is seen as ability-in-use. The situation is characterized through 'I can and I want to'. Willingness is necessary to unleach competencies in order to use them efficiently, achieving personal potential and allowing maximized performance. For the release of the employees' energy and motivation, engagement and satisfaction are involved. (Author's definition based on Hersey, 1974; Schmitz, 2005; Pryce-Jones, 2010; Pink, Gallup, 2013; 2011; Hüther, 2011).

Source: Author's collection based on mentioned sources

A general idea of reflecting on supportive frameworks for performance outcomes was touched on in the Rosenstiel's model in 1982.[254] Developing appropriate frameworks to close the gap between knowledge and practice, he defines the social permission and will as well as

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[254] Mandl & Gerstenmaier (2000), p. 111, in their book targeted on the gap between knowledge and practice, Mandle and Gerstenmaier refer to the model of Rosenstiel (1982, 1999)

situational enabling factors as a conditional part for of performance on the management side. Individual willingness and ability take central roles on the employee's side. The following diagram combines Rosenstiel's model with the idea of social capital and competencies that are addressed in the research study.
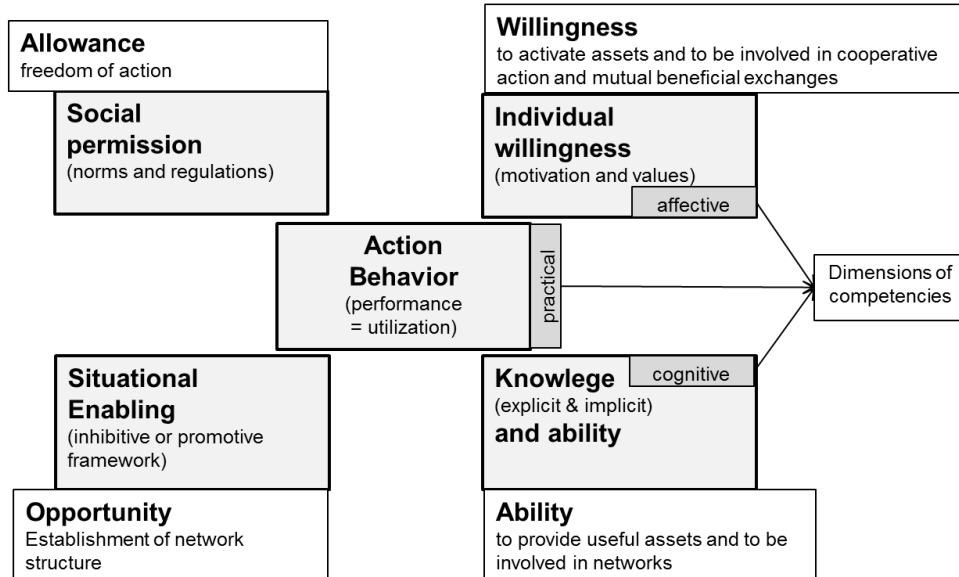
Figure 2. 4 Framework for performance

Author's model adapted from Rosenstiel[255]

The idea behind this model is to allow a transfer of the combined view of trust and employee competence utilization in the sense of this research study. It delivers a basic framework for a differentiated view on the utilization of competencies, but also a suitable description of general basic frameworks for a culture of trust. The aspects of social allowance and situational enabling are identified as decisive parameters for trust whereas the particular view of the individual's intentions and willingness fits into the general idea of employee competence utilization chosen for this research study. However, although based on this idea the research study further specifies the concept. With the focus on the aspect of competence utilization, willingness is the chosen subject. This decision was made in advance as the aspect of willingness, in particular, influences the amount of competences actually used. Being the motivating factor of the competence concept, it is also assumed that this aspect is predominantly influenced through a culture of trust. Consequently an adequate level of ability is taken as granted and will not be analyzed. Further to this the decision was made to include both interpersonal elements and

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[255] Bolzern-Konrad (2013), p. 84 simplified version of published visualization made by the author in a combined view on the model of Rosenstiel 1982,1999) in Mandl 2000, p. 111 and the concept of social capital related to Baumane/Sumilo 2009

organizational frameworks in the trust concept. Based on this decision, made earlier in the research study, the aspects of allowance and opportunity Rosenstiel's model integrate the idea of social capital in the sense of this research. In the same manner the aspects of willingness and ability fit into the general idea of competences approached in this research study. In addition the research study is placed in the business excellence environment. Detailed explanations of the chosen projection on business excellence trust and employee competence utilization are made in the following section, individually and in combination.

2.2.1 BUSINESS EXCELLENCE IN THE PRISM OF SUPPORTING AND ENRICHING ELEMENTS TOWARDS THE TRUST CONCEPT

Within this research study the interrelation of trust and employee competence utilization is embedded in the business excellence context. As pointed out already a variety of programs is in place and it is ambitious to cluster the different approaches and work on them in a theoretical manner. Therefore it was essential to develop an umbrella system first. The approach chosen for the research study is the business excellence umbrella subsuming elements that are unique to all existing approaches and relevant to the research study. Reflections on the social capital and trust concept also touched on necessary trust supports like institutionalized challenges and multiangulation. Those have been considered as forms of bridging social capital, supported by the business excellence conception. Also the trust-distrust balance opened the view on continuous improvement and institutionalized open failure handling; both being core elements of business excellence systems defined in this research study. Interestingly enough those elements are also part of the trust 'vignettes' explained and developed throughout the pilot studies. Based on these perceptions it is of interest whether and how research has approached the issues of trust and business excellence in a combined view before. With the given variety of philosophies also a wide spectrum of articles is directed at the topic under study and its possible outcomes. It has to be shown whether these articles touch on the perception whether business excellence can be seen to be supportive and enriching towards the trust concept.

Literature has recorded a significant association between business excellence activities and organizational competitiveness.[256] Furthermore the practices of business excellence systems are seen to contribute comprehensively and consistently set towards improved performance.[257] In

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[256] Irani, Beskese & Love (2004), p. 644, Irani refers to Corbett and Rastrick, 2000; Najmi and Kehoe, 2000; Pool, 2000; Prabhu et al., 2000; Terziovski and Samson, 2000; Zairi and Whymark, 2000a; Zairi and Whymark,2000b; Zairi et al., 1994
[257] Cua, McKone & Schroeder (2001), p. 679, here they refer to TQM, JIT and TPM

any case, it can be assumed that the management of a company which implements a quality system is interested in possible performance aspects. Basically two different tenors can be assumed to be motivating factors in the implementation of a quality system. First, the fulfillment of requirements made by a powerful customer, such as automotive companies. The supplier to such an industry does not have much say in the implementation of the respective system; it is simply a 'sine qua non' situation. The second tenor that can be assumed and in the best case scenario accompanies the first, is a strong belief in a living culture. If so, the decision to implement a quality system is based on a strong belief and clear passion. The first motivating factor is triggered by purely economic framework; without standards simply no delivery is possible. The second motivating factor is triggered by deep personal conviction. It can be imagined, that with the involvement of the latter there is more likelihood of success. With this the performance of the company might also be positively impacted.

Besides these aspects the focus on people, their involvement and empowerment is central to all business excellence systems. This can be traced back to the fact, that the implementation of quality systems does not only require the determination to implement change, but also sensitivity and skills in interpersonal relations. As Oakland points out, the implementation of quality systems depends very much on the climate within organizations, a climate that inspires employees to focus on the team and promote continuous improvement.[258] Although the issue of trust is an integral part of a number of writings on quality systems, there are few writings focusing on this specific perspective. In most cases the aspect of trust is combined with other elements, like the philosophy of teamwork. Oakland figures out, that the notion of teamwork is essential to quality management, because its approach is based on the premise 'that people are willing to support any effort in which they have taken part or helped to develop.' He illuminates that trust is important in teams. Being based on the independence and interdependence between supervisor and employee and between employees, trust establishes the elimination of fear.[259] This is also underlined by Coyle-Shapiro, who gives a definition of teamwork, which includes strong identification and the willingness to exert effort on behalf of the work group. She developed a model of teamwork, hypothesizing different factors directly affecting teamwork. One factor besides others is 'trust in colleagues', constituted by the belief of reciprocity and the confidence

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[258] Oakland (1995), p. 279

[259] Oakland (1995), p. 288, 289, Analog to the framework of trust, Oakland sees the necessity of teamwork and a culture of trust, because of a greater variety of complex processes and problems. The exposition of the problems to a greater diversity of knowledge, skill and experience leads to the growth of moral ownership through participation, the crossing of departmental or functional boundaries and the increase of the quality of decision making.

in the ability of the other. The study is based on the assumption that high levels of trust are positively associated with factors such as working relationship, interpersonal closeness and team cohesion, all being linked to teamwork. Although a direct effect of total quality management activities on teamwork could not be shown, quality system interventions positively affect trust in colleagues. Subsequently these affected teamwork. [260] Based on these results it can be stated that research papers on teamwork follow the tenor that trust is a prerequisite for the establishment of effective teams. Thereupon the question has to be asked whether the implementation of a business excellence system leads to trust, and with this supports effective teamwork, or if trust is a condition for the establishment of business excellence systems in which teamwork is an essential element of those. Recently Bugdol published a paper with the purpose of defining the meaning of trust in quality management and published a model on 'the trust development in total quality management'. He states that trust as an element of social capital is very important for effective total quality management implementation and maintenance. However, he had to accept that his model did not allow the determination of cause and effect of the concept.[261] Consequently his results leave open whether trust is a product of the quality development process or an essential resource whose absence makes quality deployment impossible. He also links the work of Dale and Lascelles, who challenge different levels of quality systems implementation in terms of their success in continuous improvement. In highlighting issues necessary for a successful implementation of systems, implementation stages, organizational characteristics and behavior within organizations are referred to. In their research they come to the conclusion, that very mature systems overcome a fear of failure in establishing trust on all levels of the organizational hierarchy. The respective companies have reached a point where continuous improvement has become automatic complete and the required culture type, values, trust, capabilities, relationship and employee involvement is given.[262] Dale and Lascelles suggest that quality systems support the development of trust along with their implementation status; a perspective also taken in this research study. In another comparison of quality system frameworks for small and medium enterprises, Yusof and Aspinwall found out that total quality management helps to create 'a culture of trust, participation, teamwork, quality-mindedness, continuous improvement, continuous learning and a working culture that contributes towards a firm's success and existence'. With this they position trust and quality management close to each other and support

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[260] Coyle-Shapiro (1995), p. 64, 65, 72
[261] Bugdol (2013), p. 83-85
[262] Dale & Lascelles (1997), p. 425

the idea of Dale and Lascelles that business excellence systems help to develop trust. They further work out that the quality system framework certainly needs to be simple, universally applicable and clear enough to be suitable for small businesses in order to achieve these effects.[263] This is an aspect also taken into account for the selection of elements being subsumed under the business excellence umbrella used in this research paper. In his work 'trust and managerial problem solving', Zand presents a model of trust related to 'problem solving effectiveness'. Based on his model highly significant differences in effectiveness between the high-trust groups and the low–trust groups could be shown. The differences occurred with regard to the clarification of goals the reality of information influenced the scope of the search for solution, and the commitment of managers to implement solutions. The results indicate that it is useful to conceptualize trust as behavior that conveys appropriate information, permits mutual influence, encourages self-control, and avoids abuse of the vulnerability of others. Zand further explains that when a group works on a problem, not only the problem itself has to be considered but also the way members relate to each other whilst. Apparently in low-trust groups, interpersonal relationships interfere with the problem and distort perceptions of it. Energy and creativity are diverted from searching for comprehensive realistic solutions, and members use the problem as an instrument to minimize their vulnerability. In contrast, high-trust groups generate less uncertainty and problems are solved more efficiently. Consequently the findings indicate that shared trust is a significant determinant of managerial problem solving effectiveness.[264] Although this research is also directed at teamwork, it also considers continuous improvement processes through of effective problem solving. These processes are not only an essential part of business excellence systems, but also the core of the definition of competences and their realization, being used for this research. In a more generalized view, Joe Krasman analysis the influence of organizational structure on subordinate perceptions of supervisor's trustworthiness. He found that formalization and re-utilization are positively related to the subordinates' perception of their supervisors' trustworthiness.[265] Transferred to the interrelation of business excellence and trust, clear structures within a system may be seen as contributory to the development of trust. In another study Ooi et al. made an analysis of the relationship of total quality management practices and the employee's intention of remaining. The study was based on the five dimensions: organizational communication, customer focus, employee involvement, organizational trust and

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[263] Yusof & Aspinwall (2000), p. 281, 293
[264] Zand (1972), p. 238
[265] Krasman (2014), p. 484

empowerment. The questions related to organizational trust were directed at the aspects of openness, honesty and constructive feedback. With this they found the strongest positive correlations between organizational trust and the intention of remaining in the company.[266]

Summarizing on the different approaches with regard to the interrelation of trust and business excellence a mutual basis of both can be assumed. Central frameworks for trust show overlaps with the philosophy of business excellence systems. Although the underlying research results don't allow a clear statement to be made on the direction of action between both topics, the author supports the assumption that business excellence systems, in terms of structure and philosophy, are a promoting factor for the establishment of a trust culture. Supporting a culture of trust, business excellence is furthermore expected to improve the effectiveness of problem solving in organizations and the intention of remaining in the company. Results therefore encourage the idea of the research study to embed the correlation of trust and employee competence utilization within the business excellence field. Results also support the positive impact of organizational structure on the trust concept. Institutionalized routines inherent in business excellence systems may support a trust/distrust balance. Based on this, particular aspects evaluated throughout the theoretical analyses and the pilot studies are integrated into the subsequent empirical study in order to challenge the assumptions made. The focus of the empirical study though will be made on the correlation of trust and employee competence utilization.

2.2.2   DEVELOPING A NEW INTEGRATIVE APPROACH TO TRUST

Based on the chosen perspective of trust within organizations the reflection of other author's specific conceptualizations is of value. This prepares a perspective that builds the basis for the operationalization of the trust concept and with this the facilitation of the measurement of trust. As shown before the research measurement is intended to be done on the individual level although it will not be a personality driven analysis. The focus is the individual in the organization who develops trust towards other individuals, groups, or the organization. With the intention of basing the trust model on high quality trust, trust-based-action has to be included into the model and a combined view of personal and institutional trust has been taken; existing conceptualizations are to be analyzed within these frameworks.

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[266] Ooi et al. (2006), p. 532, 536

In their research Mayer et al. present a model of trust and its antecedents and outcomes. As opposed to other authors dealing with trust in generalized others or trust as a social phenomenon, both the trustor and the trustee are considered in the same model. Basically they incorporate the trustor's propensity towards trust, his or her perceived trustworthiness towards the trustee and his or her willingness to be vulnerable in one model. Incorporating the willingness to be vulnerable in their definition of trust, they state that trust will lead to risk taking action. [267] Risk taking action is influenced by the relationship between the trustee and the trustor and the context involved. [268] The consideration of both the trustor and the trustee in the same model is an essential element. Because it is transferable to the concept of trust and employee competence utilization this approach is also applicable for the research study. However the aspect of trustor's propensity to trust towards the trustee has to be confined. Mayer et al. refer to the trustor's propensity to trust in terms of a personality trait that can be traced back to the concept of generalized trust established by Rotter. The term 'propensity' is intended to mirror the general willingness to trust others and therefore influences how much trust one has for a trustee prior to having information on that particular party. As a personality trait it is obvious that this element is basically stable but differs in the comparison between different people.[269] At this point the confines of the research study have to be made. As mentioned before the focus of this research study predominantly lies on the general correlation of trust with employee competence utilization, not on a personality driven analysis. With regard to the research model the aspect of propensity are included only in a generalized way. Analog to the exclusion of a personality driven analysis as regard to risk-affinity, there are no detailed analysis of different personality bonds. Mayer et al. also state that propensity is seen as an integrative part of their model but at the same time a pure view of this element would be insufficient. This is also because there are other important influence factors to be integrated. The different characteristics and attributes of trustees, are decisive in whether a person is seen as trustworthy. Reflecting on a variety of factors representing the trustworthiness of a person in literature ability, benevolence and integrity are perceived as being valid and sufficient in explaining trustworthiness. Ability within a specific domain influences a party. The

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[267] Mayer, Davis & Schoorman (1995), p. 709-712, here they refer to Rotter (1967) and Lewis & Weigert, (1985)
[268] Mayer, Davis & Schoorman (1995), p. 724 For example, a supervisor may take a risk by allowing an employee to handle an important account rather than handling it personally. The supervisor risks repercussions if the employee mishandles the account. Likewise, an employee may trust a manager to compensate for exceptional contributions that are beyond the scope of the employee's job. If the employee allows performance on some aspects of his or her formal job description to suffer in order to attend to a project that is important to the supervisor, the employee is clearly taking a risk. If the supervisor fails to account for the work on the project, the employee's performance appraisal will suffer
[269] Mayer, Davis & Schoorman (1995), p. 715 here he refers to Hofstede (1980)

domain relation is important as somebody might be highly competent in a technical area but not necessarily in another cognitive field. Benevolence, as a second factor is defined as the extent to which a trustee is believed to 'want to do good' for the trustor, which implies a general positive orientation. It suggests a specific attachment to the trustor unrelated to egocentric profit motives. Finally integrity is built on the perception the trustor has about a set of principles he adheres to the trustee. Mayer et al. assess ability to be limited in its unique position within the trust concept because of it's domain relation. However, they argue that all three factors of trustworthiness are needed in order to deem a trustee trustworthy. Consequently, if any of these three factors are missing trust may be undermined.[270] The proposed integration of the elements of trustworthiness is seen to be a valid and transferable part of the research model. Specifically the perception of manager's trustworthiness from the employee's point of view is essential for the research study; given the aspects of the trustor's propensity to trust and the resulting perceived trustworthiness. Mayer et al. put their focus on the assumed interrelation of trust and risk. They state, that the interrelation of both does not occur before the willingness to be vulnerable is behaviorally manifested. Although they resume that risk taking in relationships has to be seen as the outcome of trust, they still distinguish between trust (the willingness to assume risk) and trust behavior (risk taking action). This action however depends in its form on the situation. Consequently they also include the context of a specific relationship in their concept.[271] The context itself implies two categories, the relationship with the trustee and other factors outside the relationship, so called situational factors. These factors may be the stakes involved, the balance of power in the relationship, the perception of the level of risk and the alternatives available to the trustor.[272] The model also incorporates the dynamic nature of trust, represented in the feedback loop. from the outcomes of the risk taking relationship back to the perceived characteristics of the trustee. The central importance of behavioral trust will be adopted in the research study. In

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[270] Mayer, Davis & Schoorman (1995), p. 716, 717, 718, 721 As benevolence refers to the general attitude of the trustee a link to McGregor and his Theory Y X might not be dismissed. Comment from author: this aspect is of importance as regard to the final discussion of the research study.

[271] Mayer, Davis & Schoorman (1995), p. 724 For example, a supervisor may take a risk by allowing an employee to handle an important account rather than handling it personally. The supervisor risks repercussions if the employee mishandles the account. Likewise, an employee may trust a manager to compensate for exceptional contributions that are beyond the scope of the employee's job. If the employee allows performance on some aspects of his or her formal job description to suffer in order to attend to a project that is important to the supervisor, the employee is clearly taking a risk. If the supervisor fails to account for the work on the project, the employee's performance appraisal will suffer

[272] Mayer, Davis & Schoorman (1995), p. 726, for relationship aspects to be named: empowerment of the subordinate for contextual aspects: This effect was already shown as regards to the factor of ability being constant but differently utilized in different contexts. Also benevolence might be evaluated higher in case the attitudes are similar. Also integrity might be evaluated different indifferent contexts.

contrast to the model of Mayer et al. the trust-based-action are explicitly included in the trust concept. The situational context is also adopted in the research model.

In another study and with the intention of measuring trust within organizations, Dietz and Hartog give a detailed overview of the essential conceptualizations and definitions of trust in management and organizational literature.[273] Like Mayer et al. they basically incorporate the trustor's predisposition to trust (propensity), the trustee's perceived character (trustworthiness), the relationship between the trustor and the trustee as well as the situational constraints in their model, but go a step further in their conceptual interpretation. It should be noted that in comparison to the conceptualization of Mayer et al, they do not separate trust from associated behaviors. Although stating that its incorporation is still a point of contention in literature, they explicitly decide to include trust-based-action into their model.[274] This perspective is also proposed by other authors. Gillespie et al. explain similarly that trust itself often requires a leap of faith that goes beyond trustworthiness and the disposition for trust. Trusting behavior is thus seen as the behavioral manifestation or enactment of trust.[275] This perspective is explicitly seen to be supportive of the integration of trust-based-action within the research study. In their analyses of different conceptualization theories Dietz et al. also come to the conclusion that trustworthiness implies four components, these being integrity, benevolence, competence and predictability. They further state that integrity and benevolence are more frequently observed than competence and predictability. As to the research study the decision was made to include all four components as their composition was based on a comprehensive literature analysis. Analog to Mayer et at. they also underline that the relationship between trustee and trustor is of importance. The relationship is mainly characterized by measurements such as interaction frequency, common values and goals, interdependence, risk in the relationship, strength of the relationship and relationship effectiveness.[276] These aspects are seen to be valid for the research model. In addition and in line with Mayer et al., they illuminate behavioral estimation items as well as situational aspects which are accurately predictive of actual behavior.[277] Doing so they again underline the importance of the integration of risk-taking behavior into the concept of trust,

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[273] Dietz & Hartog (2006), p. 557 They highlighted how existing measures match the theory based on 14 empirical studies executed between 1995 and 2004

[274] Dietz & Hartog (2006), p. 560, here he refers to Sitkin and Pablo, 1992; Mayer et. al., 1995; Costa et al., 2001, supporting the inclusion of behavior in the concept

[275] Lyon (2012), article of Gillespie, Nicole, p. 176, Leaders delegating an important task or confiding confidential information in a junior colleague

[276] Dietz & Hartog (2006), p. 569, see also Gillespie 2012 in Lyon (2012)

[277] Dietz & Hartog (2006), p. 572 here they refer to Armitage and Connor (2001).

as well as integrating circumstances and situations and the view of external factors other than the trustee's character and behavior. This again is a standpoint seen to be valid for the research model. Although these aspects are mentioned and furthermore the placement of the study within organizations is underlined, Dietz and Hartog don't involve any aspects of system trust in their analysis and corresponding model. They discovered, by examining the aspects of respondent's assessment of the referent's trustworthiness, that the belief elements of trust dominate the currently available measurements. [278] As opposed to this argumentation the research model is made to include elements of system trust, especially as the research study is directed to the business excellence context.

Also Schweer combines personal and situational variables in his differential theory on trust. This is because he believes that the unilateral view misses out the complexity of the phenomena of trust and the significance of social cooperation in general. Further to this he postulates that in principal behavior always results from personal and situational factors. In his model, predispositions as well as trustworthiness determine personal variables, whereas the situational context includes the relationship and the environmental framework in which trust takes place.[279] Examples of situational antecedents are legislative frameworks, company culture and reputation. [280] These factors rather suggest to be part of the system trust area included in the research model. Schweer gives special importance to specific situational attributes, which follow here. The level of relationship symmetry: This describes that although a certain power-gradient is common for many relations and also true for the relationship between managers and employees; it demands an initial trust performance. This implies risk that it is interpreted as strategic behavior if it is applied by the lower ranking representative. Consequently and transferred to the analysis intended for this research study, the higher ranking representative, i.e. the manager should initiate by granting the first input. The degree of voluntariness in the relationship: As shown before if action is not voluntary the trust building process is impeded, as the freedom to dissolve the relationship is not given. In the negative case these circumstances might lead to resignations, such as an 'inner dismissal' as a consequence of fear of job loss. This aspect is seen to be valid in general, but will not be analyzed within this research study. It is assumed that the situation in general is more or less the same for any employee. Personal differences in motivation to join the company and

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[278] Dietz & Hartog (2006), p. 567, note that Mayer 1995 states that trust and trustworthiness are two separate constructs, Mayer et al, 1995, pp. 711, 729.

[279] Jammal (2008), p. 18 article of Schweer, with this he refers to Kurt Lewin 1935 and the determinants of behavior and to the transactional view on social processes.

[280] Becke et al. (2013), p. 234, in Lachner, Röwenstrunk, Strum & Schlick

accept the job will not be taken into account. The degree of possibility for open communication (open handling of failure): The openness of communication is very well controllable through the relationship as well as through organizational structures and systems. Therefore it makes sense to implement this aspect into the research model. Length of the relationship: According to Schweer also the duration is a valid attribute of trust, as trust has to develop over time. On the other hand, and also broached by Schweer, the quality of the initial contact, the first impression, may shape the whole subsequent cooperation. A positive first impression might be strong enough to define the possible level of subsequent trust.[281] As these effects might be difficult to measure as well as being difficult to differentiate in its reverse trend, the decision is to exclude this aspect from the research study, especially as the quality level of trust chosen for this work implies an indirect relation to the time effect: high quality trust necessarily needs some time to be built. With regards to this, a general medium retention of employees is assumed.

Integrating both interpersonal and system trust, Rousseau describes trust in organizations as a 'meso' concept. Doing so she combines micro level psychological processes and group dynamics with macro level institutional arrangements. She points out that institutions may promote or constrain trust relations. It might be argued that intuitial mechanisms, creating impersonal forms of trust and less standardized (but more flexible) interpersonal trust build a certain tension. Thus institutional mechanisms may reduce interpersonal trust, whereas a minimum level of institutional trust is a 'sine qua non' for the emergence of interpersonal trust. She concludes that a variety of institutional factors, like legal forms, social networks, and societal norms for conflict management, are likely to create a context for interpersonal trust. [282]

To summarize, in order to reflect on the individual in the organizational context, both interpersonal and institutional mechanisms are of importance. Structures and systems along with personal relationships are seen to be supportive as regard to transparent goals and values as well as regard to the degree of freedom given to the participants. Consequently the organizational context elements are seen as a condition for functioning trust as an enabler of competent action. Based on the model of Mayer et. al both the trustor and the trustee are considered in the same model. The aspect of propensity of the trustor towards the trustee is also integrated in the framework of the trust model developed in the research study, even though a consideration of different personalities is clearly excluded from the study. The proposed integration of the element

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[281] Jammal (2008), p. 19,20,22, article of Schweer, here he refers to Forgas 1999 and Rosemann & Schweer 1995, Schweer 1996

[282] Rousseau, Sitken & Burt (1998), p. 393 here she refers to House, Rousseau, & Thomas-Hunt, 1995, p. 397, p. 401, here she refers at the one end to Zucker (1986) and at the other end to Pearce and Brzenksky

of trustworthiness is seen to be a valid part of the research model too. Its components will be based on the results of Dietz and Hartog, integrating integrity, benevolence, competence and predictability into the model. Specifically the perception of manager's trustworthiness from the employee's viewpoint is essential. Also the emphasized importance of behavioral trust is adopted by the research study. The integration of trust-based-action to the concept is essential for the research study, since trust is analyzed with respect to the employee competence utilization concept, which requires the notion on action and performance by definition. Further to this the situational context is considered. Finally both personal trust and organizational trust mechanism are included in the model.

2.2.3 SUBSTANTIATE THE IMPORTANCE OF THE ELEMENT OF WILLINGNESS

After touching on trust supporting elements of business excellence and a deeper insight into the conceptualization of trust a further step in approaching the concept of employee competence utilization has to be made. Along with the analysis of trust, the chosen concept uses a framework that can be interpreted as an enabling condition for employee competence utilization. Both the concepts of trust and competence utilization are considered to incorporate the aspect of behavior. As shown before with the intention of focusing on ability in use, the research study assumes that employees fulfill the requirements of the company as they have been chosen adequately in advance. As a result the basic competence level is taken as optimal and the concept of employee competence utilization focuses on the element of willingness (I can and I want to). Only if willingness is involved is ability 'in use'. This is of importance as the concept of competencies necessarily implies performed action. Not before a task is successfully executed is competence demonstrated. Consequently it can be assumed that in order to solve complex problems successfully, willingness is needed to transform ability into competence. This is exactly what the concept of employee competence utilization (ECU) shall symbolize. Putting the element of willingness at the center a number of researchers and models become involved.

Explicitly Gallup touches on the aspect of willingness. In their study named 'The Gallup Workplace Audit' the relationship between engagement at work and organizational outcomes is reflected on. With the study's intention of analyzing the relationship between the elements and their respective performance, a number of elements representing conditions that are important for the performance of organizations are defined. These include 'overall satisfaction', 'commitment',

'growth perspectives' and 'absenteeism', just to name but a few.[283] The concept of commitment seems to be essential here, because it is described as embracing an employee's desire to remain in an organization, the willingness to exert effort on its behalf and the belief in and acceptance of the values and goals of the organization.[284] In general Gallup base their study on behavioral economics, emphasizing the interplay between rational, perceptual, and emotional processes in human decision behavior.[285] The strongest effects of engagement elements could be monitored in turnover, safety incidents, quality incidents, and absenteeism. The motivation to execute the study was supported by the fact that only 13 percent of employed respondents to the study were engaged in their jobs. Employees whose roles are likely to require high levels of autonomy and self-expression are also more likely to be engaged than those in less individualized roles. As a result the study underlines the importance of the employees' responsibility towards the outcomes of defined goals and the freedom in finding their own routes towards those results. The allowance to do so is also required for lower hierarchical levels.[286] These results are applicable to the research study, with regard to the antecedents and measurable indicators of willingness. The framework of allowance, integration and delegation refers to the concept of trust. The analysis of engagement elements such like satisfaction, identification, commitment, absenteeism and turnover refer to possible indicators for measurement of the competence concept.

In his book on motivation Daniel Pink also underlines that the element of willingness is essential. Touching on the rise and fall of motivation he specifically focusses on three elements: autonomy, mastery and purpose. As to his definition, 'autonomy' is self-direction (urge to direct our lives), 'mastery' is a good balance of compliance and engagement (desire to get better and better in something that matters), and 'purpose' is approaching the sense in our lives (yearning to do what we do in the service of something that is larger than ourselves). [287] Based on a historical movement towards greater freedom, he reflects on autonomy as being the opposite of control. He argues that control leads to compliance whereas autonomy leads to engagement based on the desire to constantly improve at something that matters (mastery). Further to this he states that

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[283] Gallup Inc. (2013b), p. 1, the study is reference to Harter, J.K., Schmidt, R.L., Agrawal, S., Plowman, S. K. (2013) the relationship between engagement at work and organizational outcomes. 2012 Q[12,] meta-analysis, Omaha, NE: Gallup.
[284] Morrow (1983), p. 491, here he refers to Mowday et al., (1979)
[285] Allen van (2009), p. 3, here they refer to Kahneman, Schiller, Thaler, Deaton, Löwenstein.
[286] Gallup Inc. (2013a), p. 1, 105 The study was directed to 1.4 Mio employees in 192 organizations, across 49 industries, in 34 countries. The survey was questionnaire based and the results of each company or unit was monitored against the total database. Questions refer to four areas: the employee's perception of esteem, its role in the organization, the relationship to the organization as well as the growth perspectives of the employee.
[287] Pink (2011), p. xi

purpose is needed to provide a context for the two elements and to balance those against each other. Purpose activates the additional potential of people, who are striving for mastery, to work autonomously as it puts the action into the service of some greater objective. He explains that this is because a high degree of motivation is driven by desires that are larger than the human being itself. Consequently, and in order to build frameworks that allows employees to be engaged, organizations have to allow self-motivation. Being focussed only on extrinsic awards, people might simply work to the point that is triggered by the award. Mechanisms designed to increase motivation externally can even reduce or damage it, boost creativity and in the negative case even reinforce negative behaviour. He explains that once employees have passed the baseline of the motivation pyramid, elements of genuine motivation are needed. Therefore Pink is convinced that as soon as the basic needs are compiled and people strive towards the fulfilment of social needs and self-actualization, organizations have to put meaningful achievements and objectives at the centre. [288] This aspect is of particular importance as intrinsic motivation supports satisfaction, in the organizational context being defined as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences.[289] Based on his explanations which are closely related to the motivation theory of Maslow, intrinsic motivation is the central to engagement of employees. Indicators of intrinsic motivation should thus be significant within the concept of willingness chosen for the research study.

In her book on 'happiness at work' Jessica Pryce-Jones defines happiness as 'a mindset that allows maximizing performance and personal potential'.[290] The achievement of one's own potential is therefore very close to the conceptualization of employee competence utilization, specifically the element of willingness. She describes the concept as the feeling of being energized, using personal strength and skills, as well as learning new skills and finally overcoming challenges at work. Like Pink she touches on the concept of mastery and purpose as a basic human drive.[291] Comprising talent, basic human drive and energy in its concept, the idea of potential utilization underlines the idea of intrinsic motivation shown before. Further to this she states that there are hardly any people who have absolutely no desire to grow and develop. Supporting the assumption of the research topic Jessica Pryce-Jones further touches on pride, trust and recognition as antecedents of the exploitation of potential. She states explicitly that organizations wouldn't function without trust. In line with the basic understanding of the research

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[288] Pink (2011), p. 108, p. 111, p. 133, p. 58
[289] Smith & Hoy (1992), here he refers to Locke (1969)
[290] Pryce-Jones (2010), p. 4
[291] Pryce-Jones (2010), p. 170, 185

paper she explains that trust is a social and psychological resource that allows focusing on the job, whilst reducing costs, saving time, and allowing risk taking without considering hidden agendas. Finally she states that trust is a resource with no initial investment cost. In contrary if trust is not available 'everyone pay the price.'[292] Arguing that trust is strongly connected with the usage and achievement of one's own potentials the general approach of the research model is supported. Besides the available talent, the willingness to achieve personal potential symbolizes the potential that lies at each company's disposal. Specifically generally positive attitude of employees towards meaningful achievements as well as the energy available in each employee, refer to and symbolize the role of willingness chosen for this research study.

In contrast to the other authors, Hüther relates his argumentation on how we can use our potential to the field of brain research. He argues that it is a basic psychological need of every human being to directly transfer any status dissonance into a stabilized structure. Any misbalance in cognition initially leads to resistance. But in order to achieve a new balance a change in attitude and behaviour is needed. As a result compliance is achieved.[293] He further explains that whenever human beings feel insecure and threatened their brain is limited in the execution of complex behavioural patterns. In these situations the human brain is only able to run a basic program. In order to overcome this limitation, the recovery of trust allows higher ranking parts of the brain to come back into use.[294] With this Hüther illustrates that the usage of potential is bound to a dilemma. On one hand its usage is naturally linked to misbalanced and insecure situations, but on the other hand it needs to compensate for insecurity in order to be utilized. This is an assumption supported by the underlying definition of competent action. Consequently potential is only utilized if the subject bears against risk and insecurity. The basic theory behind the research model is supported, by stating that trust helps overcome this dilemma. Further to this Hüther also underlines the importance of social networks in this respect and specifies that the correlation between trust and utilized potential only becomes active if social networks are inherent. The tendency to remain within narrow constraints is dominant and is only broken when relationships allow the positive experience of different ideal behaviour. Therefore potential needs alternative networks and relationships in order to be released.[295] Purposely driven

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[292] Pryce-Jones (2010), p. 156
[293] Hüther (2011), p.112, see also Werth L.& Mayer J., p. 226, cognitive dissonance: incompatible cognitions lead to inner conflicts felt uncomfortable. It induces the attempt to reduce the dissonance. Changes in attitude and behavior are the result
[294] Hüther (2011), p. 118
[295] Hüther (2011), p. 119, 121, 128, 147, 149

innovation is therefore not possible based entirely on an isolated view of one single person. Similarly the degree of enthusiasm and the perception of contributing work are seen to be positively influenced within networks.[296] Thus the embedment of trust in the theory of social capital is supported here.

To summarize the studies, almost all studies base their ideas on the generally positive attitude of employees striving for meaningful achievements. Besides the available talent of its employees, the willingness to achieve personal potential symbolizes an important potential that lies at each company's disposal. In approaching the aspect of the willingness to perform, authors further base their ideas on motivation theories in general (Maslow[297], Herzberg[298] and Huisinga [299]). Thus intrinsic motivation plays an important role within the concept especially as it also supports the level of employee satisfaction. Engagement is also part of the concept operationalized in terms of identification, commitment and absenteeism. These indicators are seen to be valid for the research study. Further to this authors closely connect the aspect of willingness with frameworks of trust, implicating allowance, integration, meaningful goals, network and delegation as doors unfolding potential. Arguing that trust in strongly connected with the release of energy or potential of each employee the general approach of the research model is supported. In this way the need for social networks as part of the trust concept is underlined. Based on the industry specification, results of two pilot studies executed 'pre ante' and the chosen conceptual framework, the new integrative model will be now be conveyed.

2.3 DERIVATION OF THE INTEGRATIVE MODEL ON TRUST AND EMPLOYEE COMPENTENCE UTLIZATION AND OPERATIONALIZATION OF TERMS

The definition of the integrative model is based on the conceptual framework developed before. As stated, the correlation of trust and employee competence utilization is seen as an intra-

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[296] Hüther (2011), p. 153, 159, 131 at this point he mentions that trust in others and trust in oneself is needed, see also Luhmann

[297] Maslow (1981), Abraham H. Maslow belongs to the most important representatives of the humanistic psychology. His motivation theory explains the human action based on a stepped motivation theory and is based on a basic positive propensity to human beings. The last step is based on a mental purpose that allows self-actualization.

[298] Herzberg, Mausner & Snyderman (1993), quality work that fosters job satisfaction and health enjoys top priority in industry all over the world. This was not always so. Until recently analysis of job attitudes focused primarily on human relations problems within organizations. While American industry was trying to solve the unsolvable problem of avoiding interpersonal dissatisfaction, problems with the potential for solution, such as training and quality production, were ignored. When first published, The Motivation to Work challenged the received wisdom by showing that worker fulfillment came from achievement and growth within the job itself. In his new introduction, Herzberg examines thirty years of motivational research in job-related areas.

[299] Huisinga (1999), business and human resource education as regard to scholar and business education, important roles in management and organization.

organizational phenomenon, with a special view of the relationship between employees and the respective manager within the institutional system. A relationship between employee and manager is two-sided by nature. Nevertheless different angles on the topic are thinkable. In order to reduce the possible matrix of perspectives one crucial perspective is chosen, which is shown as follows.
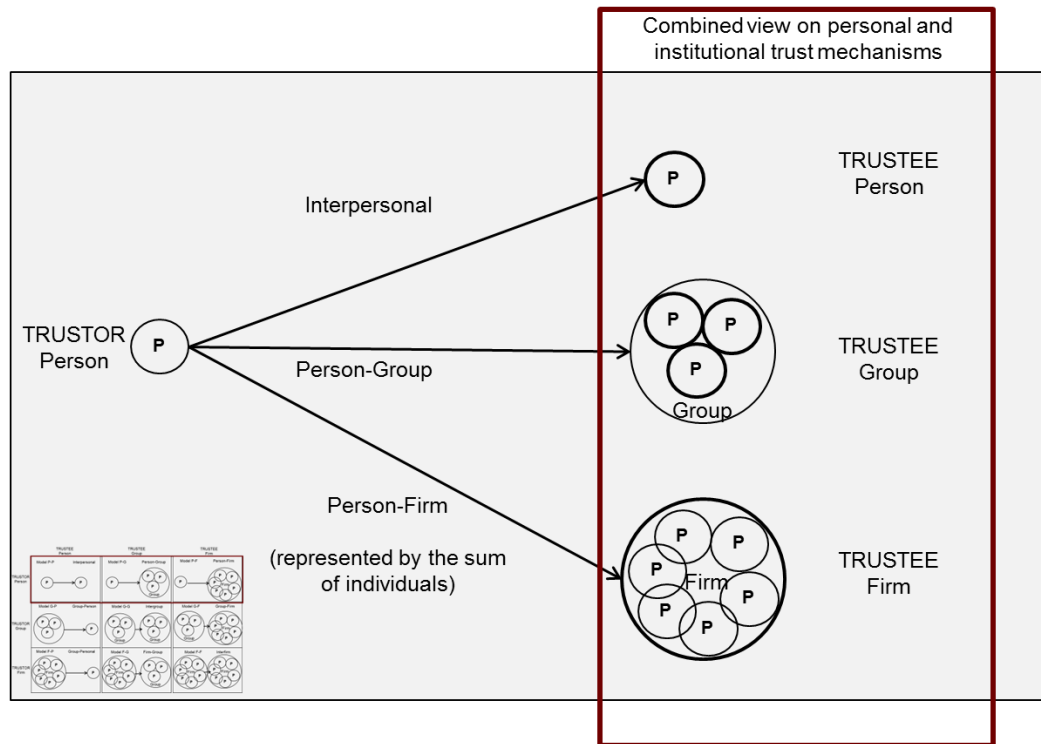
Figure 2. 5 The employee's perception of trust – chosen angle on a two sided relationship

Source: Author's creation related to Zaheer [300]

The selected view for the main empirical study considers the trust level of employees regarding management as an individual and collectively as a group and the organization itself. The viewpoint is that of the individual in the organization, who develops trust towards other individuals or systems represented by individuals. As management represents both the individual and the organization as a system, personal and institutional trust mechanisms are affected. [301]

The concept of the research model basically integrates the trustee (management) and the trustor (employee) in one picture. The intention is to measure the perception of the trustor's trust level towards the trustee. Thus the employee evaluates its management. A second measurement is made of the level of the trustor's competence utilization. In this case the employee evaluates its own release of potential. Also, in order to reflect on the individual in the

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[300] Zaheer & Bachmann (2006), p. 238
[301] Rupf Schreiber (2006), p. 105, see also Bliesner 2011, p. 15 and Gillispie in Lyon 2012, p. 176

organizational context, both interpersonal and institutional mechanisms are of importance. Consequently personal characteristics, relationship elements and the situational context are integrated within the trust concept. The following diagram shows the resulting framework of the integrative model.
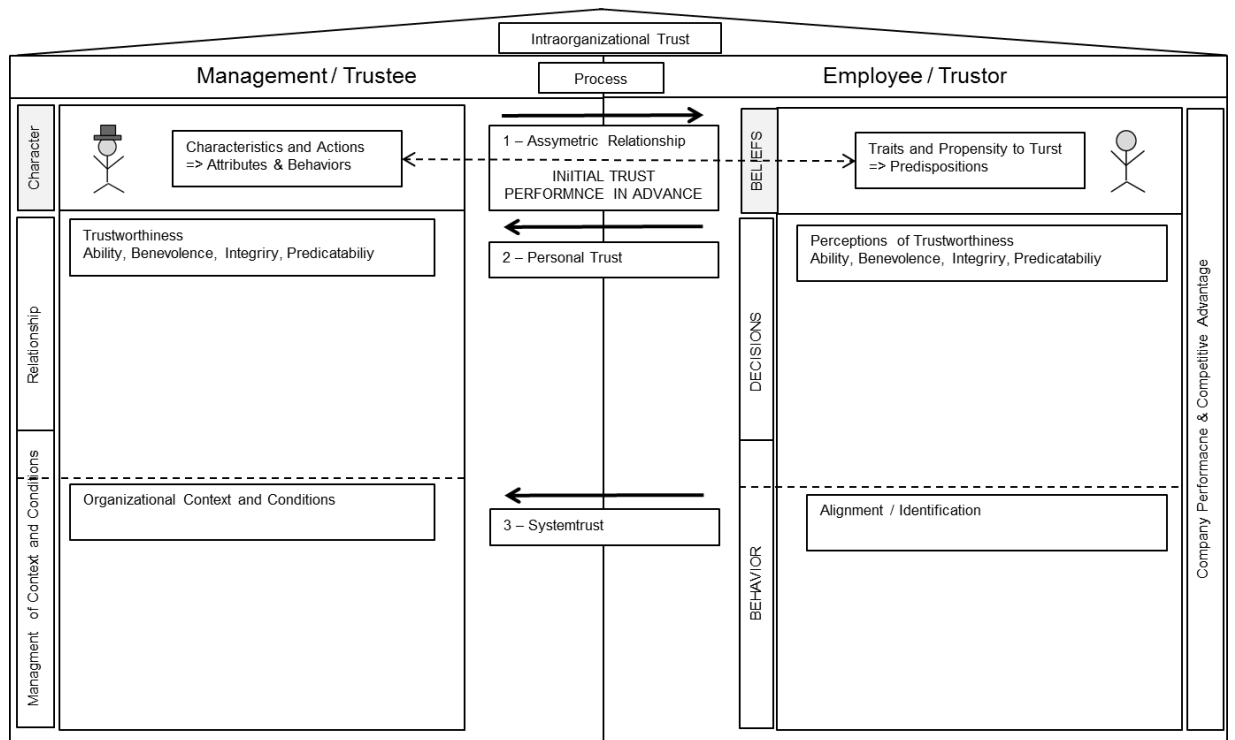
Figure 2. 6 The framework of trust - based on selected conceptualizations

Source: Author's Model

The trust concept is conceptualized as a process of interrelation between the trustee and the turstor. Starting with an initial trust performance of the trustee (1), the process is based on personal trust mechanisms involving the character of the trustee and the pre-dispositions of the trustor (2). The relationship between trustee and trustor is also part of the personal trust mechanism but is additionally influenced by the organizational context. The latter refers to system trust mechanisms (3). Along with this process the trustor's beliefs of the trustee influence decisions resulting in actions conceptualized as employee competence utilization. It has been shown that the leadership-employee relationships in an organizational context are basically of asymmetric structure (1). Consequently, and transferred to the direction of analysis intended for this research study, the higher ranking representative, i.e. manager should initiate in giving input,

as has been pointed out by Schweer before.[302] Schoorman also accentuates that power differences and asymmetry of information have implications on trust development. Consequently the party that has more power in the relationship perceives less risk and thus will and should engage in more risk-taking action.[303] This aspect is also supported by Eberl who underlines that the initial one-sided starting point of trust is necessary to establish long-term sustainable reciprocal trust.[304] Based on these theoretical insights this first 'catalyzing' step is conceptualized as a pre-condition to the basic trust process. This is not measured within the empirical study and is therefore taken for granted as a part of the basic framework. Based on the assumption of a general positive attitude of both the trustee and the trustor, which all studies base their ideas on, it can be assumed that initial trust performance is a condition justifying a positive trust circle. [305] As stated before the context of the topic requires the integration of both the view on interpersonal and organizational trust. Personal elements are involved, on both the trustee's and trustor's side; on the trustor's side the personality trait of having a general positive attitude towards trust, on the trustee's side the personal characteristics of trustworthiness. As it has been shown before and based on former studies the elements of ability, benevolence, integrity and predictability are involved here (2). Again the research study is does not establish a personality driven analysis, therefore the evaluation on the trustor's predisposition and the trustee's trustworthiness is addressed in a general manner. Also the view on personal relations and the importance of circumstance and situations on factors other than the trustee's character will be included (3).

Therefore the model concentrates on the interaction of the trustee and the trustor with regards to behavioral and institutional elements of the trust process itself. The decision to integrate relationship elements into the trust concept is not only supported by former studies it was also based on the reciprocity assumptions in favor to the opportunist approach. Relationships develop over time. As shown before also trust building includes a time factor which impacts the trust quality level that can be achieved. Being defined for the research study the chosen approach to trust is based on higher quality trust, which is based on relationship specific evidence.[306] With respect to the research study, the opinion is taken that long term sustainable trust needs to be

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[302] Jammal (2008), p. 19 article of Schweer Martin, K.W., trust and social action, see also Schweer1998 a, If trust performance is made by the lower ranking representative, this implies the risk that it is interpreted as strategic behavior. Consequently and transferred to the direction of analysis intended for this research study the higher ranking representative, i.e. manager, should initiate by giving the first input.
[303] Schoorman, Mayer & Davis (2007), p. 345, 346,351
[304] Eberl , p. 240
[305] McGregor & Cutcher-Gershenfeld (2006)
[306] Dietz & Hartog (2006), p. 563, comment from the author: this decision was based on the perception that real trust does begin with knowledge based trust deriving from relationships over time not only on observation.

based on repeated interaction as well as on mutually internalized norms and the desire to fulfill those. Consequently the time effect will be not be analyzed separately as the measurement itself implicates trust levels that are established in a process that exceeds the initial contact between trustee and trustor. This assumption can be made as the average membership of all employees lasts longer than an initial contact persists. In the course of analysis of the theoretical background and specific conceptualizations in place, it was shown that the behavioral aspect is an essential indicator towards the visibility of competence. Consequently the engagement in a trust-based action is of interest for the research study as trust is analyzed with respect to employee competence utilization. At the same time trust is manifest not before the resulting action is performed. In a sense the performing act gives the evidence that trust achieved a critical mass to result in a trust based action being a catalyzer inducing employees not just to comply with duty but to show their potentials and to go the extra mile. The underlying model is directed to analyses the impact of trust on the way of motivation, effort-willingness and work-satisfaction being typical performance situations and chosen indicators for employee competence utilization.[307] Along with personal relationships, structures and systems are seen to be supportive with regard to transparent goals and values and also to the degree of freedom admitted to the participants. Consequently the organizational context elements are seen as a condition for trust to function as an enabler for competent action and will therefore be included to the model either. The aspects of allowance and delegation play an important role here. Especially the allowance of employee empowerment is seen as a mutual basis between the concept of trust and the philosophy of business excellence. Results also support the impact of organizational structure towards the trust concept. Touching on the supportiveness of underlying systems and structures institutional trust mechanisms are affected. As shown before the interesting aspect of system-trust is that involved mechanisms can be de-personalized. Institutionalized routines, inherent in business excellence systems may support a well-adjusted trust-distrust balance though. Contributed through the analysis of the pilot studies, these elements will be integrated into the subsequent empirical study in order to challenge the assumptions made. Different to other concepts the chosen research

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[307] Jammal (2008), article of Schweer Martin K.W. In line with Martin Schweer (2008) trust is seen as a central element of information-processing. Experienced trust goes in line with a general positive evaluation of the overall situation and specifically with the motivational sensitivities being involved. Therefore he states, that trust is surely more than just a variable of social culture. Through the way of motivation, effort-willingness and work-satisfaction the relevance of trust on typical performance situations is obvious. This message is seen as a supportive argument for the combined conceptualization of trust and ECU being chosen for the research paper at hand and being a novelty in conceptual approach as to the knowledge of the author.

model is characterized through an integrative approach. It combines on one hand the common frame of trust assessment in the form of attributes of trustors and trustees with the network structure and situational context. On the other hand it integrates personal and system-trust. With regard to the correlation of trust and employee competence utilization also a trust-based-action is essential to the model.

Based on the described framework for the integrative model and along with the chosen definitions of trust and employee competence utilization the operationalization of the model can be approached. Trust as well as employee competence utilization are latent variables. Variables are defined as a characteristic of a phenomenon that can be observed or measured. [308] In many theory supported problems often non-observable variables are involved. These are so called latent variables. [309] With the intention of analyzing the correlation between the independent variable 'trust' and the dependent variable 'employee competence utilization' measurable indicators need to be defined in order to make use of a scale sufficient for a quantitative statistical analysis. [310] Furthermore a structural equation model is used to transfer the theoretical language in direct measurable empirical values that are observational and help to reduce a complex on possible variables to a practical number. Indicators for trust and employee competence utilization have been chosen from several literature sources further to the findings of the pre-studies. Being aware of the particularity of correlation between trust and employee competence utilization it is reasonable that the operationalization of the research model is individual as well. Nevertheless the chosen indicators for both trust and employee competence utilization are also related to a number of existing research works. Further to this other authors suggest that the operationalization of trust models by nature is diverse. Gillispie points out that out of a wide range of trust measurements only few had been replicated and these beyond this with low accuracy.[311] Lyon et al. indicates that whilst diversity has allowed trust research to grow, the lack of convergence and replication is striking.[312] This is underlined by Dietz in saying that despite the resurgence of interest the treatment of trust remains extremely fragmented. Further to this he

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[308] Collis & Hussey (2009), p. 188
[309] Backhaus (2011), p. 18
[310] Backhaus (2011), p. 18, 519, as shown before, variables are defined as a characteristic of a phenomenon that can be observed or measured. In many theory supported problems often non-observable variables are involved. These are so called latent variables
[311] Lyon (2012) article of Gillespie, Nicole, p. 177 Here she refers to a study of McEvily and Tortoriello (2011) finding out in detailed review, that from 171 trust papers published over the past 48 years, 129 measures of trust could be identified. Of these more than half were newly developed rather than replications. Only 22 instruments had been replicated more than once.
[312] Lyon (2012), p. 7-13

states that conceptualizations do not appear to have been translated into operationalization in empirical research.[313] Nevertheless and although the research model is a new development the chosen indicators are related to a number of specific research works. In a first step and based on the results of the previous analysis the following clusters have been defined for the research model. For trust, fairness (TF), clear goals & transparency (TC), network structure (TN) and delegation level (TD) have been chosen. 'Fairness' touches on the perceived characteristics of the trustee, 'network structure' reflects the relationship notion, 'clear goals and transparency' refer to relationship aspects and simultaneously approach the contextual framework and 'delegation level' is a prerequisite and constituent of a framework of allowance for trust-based-action. Employee competence utilization, 'retention' (ER), 'over obligatory performance' (EO), 'productivity per employee' (EP) and 'satisfaction level' (ES) are the elements of choice. Exceptional performance as well as satisfaction level directly reflect on the willingness to perform and thus are emotionally attached to the perception of trust. Productivity and retention are additional factual and measurable outcomes along with those emotional elements. Closing the circle of the definition of the variables, the chosen indicators are expected to cover the complete characteristic of the respective concept.

Table 2. 3 The link between the variable's definition and its indicators

Trust is described as a 'risky performance in advance under conditions of vulnerability, complexity, uncertainty, risk and dependence.	Competent action is described as the abilities and willingness to cope successfully and self-organized with context specific requirements.
Dependence – Fairness	Willingness – Retention
Complexity – Clear Goals	Context specific requirements (relevance of learning and situation adequate action) – Over obligatory performance
Uncertainty – Network, Communication	Successful (positive target fulfilling action) – Productivity per employee
Risk - Delegation	Self-organization – Satisfaction

Source: Author's model

Trust is described as a 'risky performance made in advance under conditions of vulnerability, complexity, uncertainty, risk and dependence. Therefore fairness, networks and relationships, clear goals and communication as well as the freedom of action are needed in order to reduce dependence, complexity, uncertainty and risk that may limit competent action. These indicators are effective as catalyzers for competent action. Competent action is described as abilities and willingness to cope successfully and be self-organized with context specific

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[313] Dietz & Hartog (2006), p. 557, 558, here he refers to McEvily et al. 2003, p. 91 and Currall and Judge (1995)

requirements. Therefore willingness, self-organization, and successful performance are seen to be relevant outcomes of a competent action based on a culture of trust.[314]

With the integration of the framework of trust and employee competence utilization the structural equation model is formed. The resulting model is shown as follows.
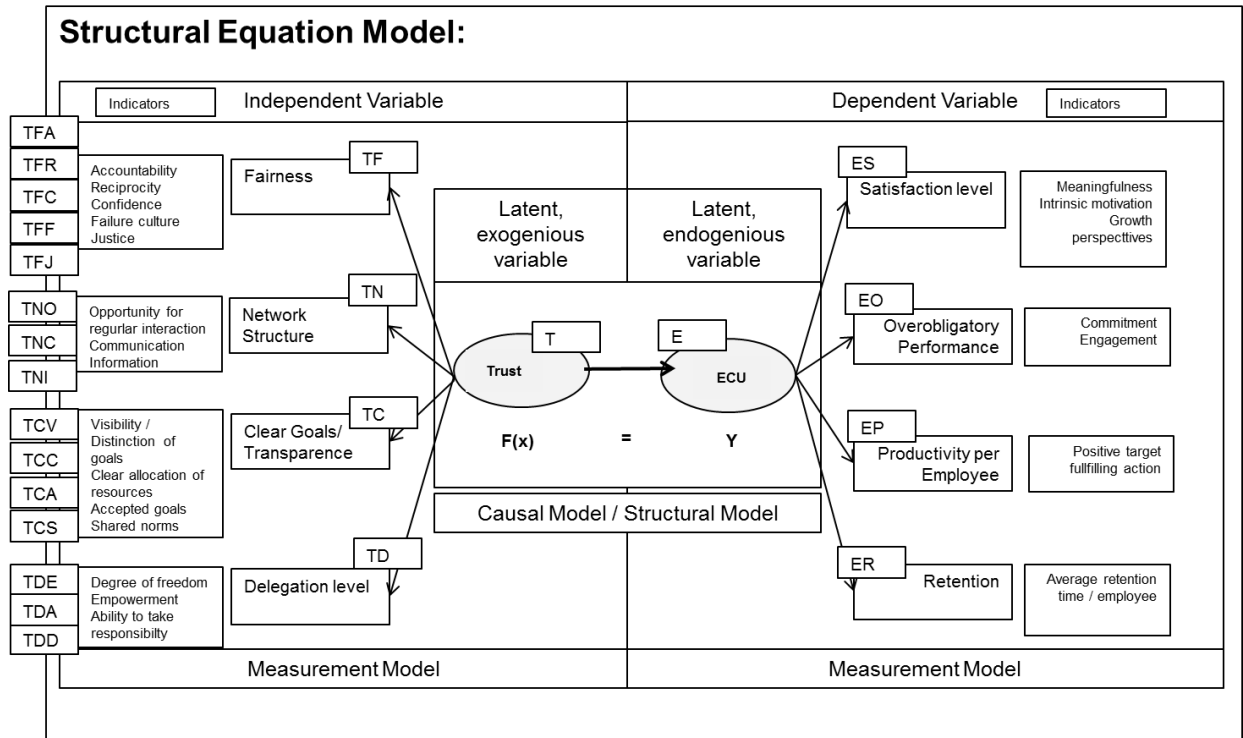
Figure 2. 7 The research's structural-equation

Source: Author's model

Based on the structural equation further operationalization of indicators as well as the subsequent instrumentalization of the empirical study was the next logical step. On the trust side elements refer to studies of different authors being approached before. The evaluation process was additionally based on results of the 'Academie Study' which had inquired 2500 German senior Management contacts and established a questionnaire related to trust. 350 companies and their respective managers of all branches and company sizes have finally participated in March 2006 and were approached related to their experience, attitude and exposure with the key factor trust. In 14 questions they have been interviewed with regard to their personal attitude and value of trust for the daily business. [315] Along with this empirical study the 'Academie' found out that the creation of trust is promoted by a personal dialogue. The interest of the leader in the task,

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[314] Bolzern-Konrad & Sumilo (2014b), p. 1134
[315] Die Akademie (2006), p. 6

performance and options are of most importance. [316] A very comprehensive theoretical and empirical study of the 'RessourenKultur' also gave insight in questionnaires and interview guides with respect to trust. The study was specifically valuable with regard to specific questions touching the culture of trust. The research paper RessourenKultur' was based on an extensive research project of the 'Wuppertal Institute für Klima, Umwelt, Ernergie GmbH' and the University Bremen. The research analyzes the correlation between a culture of trust, efficiency in the usage of resources and the capability for innovation. With innovation being a central part of competencies, touching on the affective dimension, these aspects were valuable for the research model. Within the research program underlying studies have been executed in quantitative and qualitative empirical studies also touching detailed the aspect of trust. [317] The final table subsuming the indicators is shown as follows.

Table 2. 4 Operationalization of the model – selection of trust indicators

Cluster	Indicator	Source
Fairness *touching on the perceived characteristics of the trustee	Accountability Reciprocity Confidence Failure Culture Justice	Pryce-Jones, Jessica 2010, p. 151, 157, 161 Die Akademie, 2006 p. 13,18 Bliesner, A, Dreuw, K, Gundert, H, Klinke, S, Nagler, B & Rohn, H (eds.) (2010)
Network structure * reflecting on the relationship notion	Opportunity for regular interaction Communication Information	Pryce-Jones, Jessica 2010, p. 149,166 Bliesner, A, Dreuw, K, Gundert, H, Klinke, S, Nagler, B & Rohn, H (eds.) (2010) Akerlof, George 1979
Clear Goals/ Transparence * touching on relationship aspects but simultaneously approaching the contextual frame	Visibility/distinction of goals Clear allocation of resources Accepted goals Shared norms	Gallup Workplace Audit / 1 /2 Pryce-Jones, Jessica 2010, p. 157, 161 Die Akademie, 2006, p. 13,18 Putnam 1995, p. 664,665
Delegation level	Degree of freedom Empowerment Abiltiy to take responsibility	Die Akademie, 2006, p. 13,18 Baumane, Ilona, Sumilo, Erika 2007 Adler, PS & Kwon, S 2002
Further general sources: Mayer, RC, Davis, JH & Schoorman, DF (1995), Schoorman, DF, Mayer, RC & Davis, JH (2007), Dietz, G & Hartog, DND (2006), Rupf Schreiber, M (2006), Das, TK & Teng, B 2004, Rousseau, DM, Sitken, SB & Burt, RSCC (1998), Akerlof, G (1979), Hüther, G (2011), Putnam, RD (1995), Luhmann, N (2014), Eberl, P. in Maring, M. (2010)		

Source: Author's selection based on listed authors

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[316] Die Akademie (2006), p. 21
[317] Bliesner et al. (2010)

On the side of employee competence utilization elements also refer to studies of different authors being approached before. The selection of indicators has been based on management literature regarding aspects of leadership, engagement, motivation, satisfaction, needs, and commitment. All of them being are seen to be related with the usage of the potential each employee incorporates in a visible or hidden form. Referring to the leadership style of Hersey and Blanchard, commitment and motivation are important indicators for competence utilization.[318] The research also refers to Maslow, Herzberg and Huisinga with regard to the aspect of motivation and needs. The aspects of engagement and enthusiasm have been touched especially in the work of Hüther and Pink. As shown before the evaluation of engagement refers basically to the Gallup Workplace Study, as it was seen to be a well-fitting source for various questions as regards to the variable of ECU.

Table 2. 5 Operationalization of the model –selection of employee competence utilization indicators

Cluster	Indicator	Source
Overobligatory performance * reflecting on willingness, attached to attitude and decision	Commitment Engagement	Daniel Pink, 2011 Falk, 2011 Herzberg, 1959 Pryce-Jones, Jessica 2010, p. 153 Hersey & Blanchard 1974, p. 27 Pryce-Jones, Jessica 2010, p. 153 Gallup, 2013 - 5/7/8/9/10/5 Hüther, G (2011), p. 49
Satisfaction level * reflecting on willingness, attached to attitude and decision	Meaningfulness Intrinsic Motivation Growth perspectives	Gallup, 2013- 4 /11/12 Herzberg, 1959 Huisinga, 1999 Die Akademie, 2006, p. 18
Productivity per employee * reflecting on behaviour and action	Positive Target fulfilling action	Eberl 2009, p. 42 Gallup, 2013 - 3 Penrose, 2009 Own measureables
Retention * reflecting on behaviour and action	Average retention time per employee	Own measureables Die Akademie, 2006, p. 13,18
Further general sources: Schmitz (2005), Maslow (1981), Herzberg (1995), Huisinga (1999), Hüther, G (2011)		

Source: Author's selection based on listed authors

The structural equation research model was finally positioned within the framework of trust being developed before. As a result the unique concept of the research model as an integrative approach on intra-organizational trust as a catalyzer for potential release was shaped.

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[318] Hersey & Blanchard (1974), p. 27
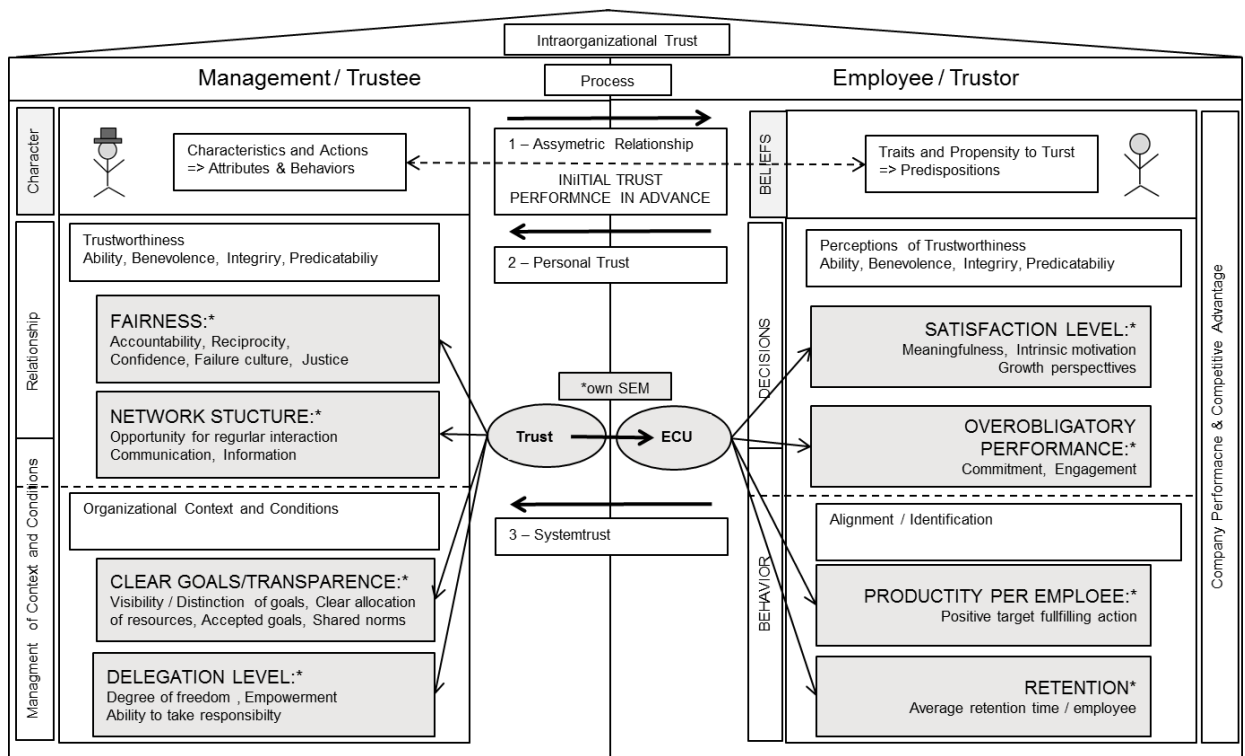
Figure 2. 8 The research model – trust as a catalyzer for competent action

Source: Author's Model

In order to picture the organizational context and the individual elements both the interpersonal and institutional mechanisms are of importance. Structures and systems along with personal relationships are seen to be supportive as regards to transparent goals and values as well as regards to the degree of freedom admitted to the participants. Consequently the organizational context elements are seen as a conditional element for trust to function as an enabler for competent action. Competence utilization by definition requires the notion on action and performance. As a result the concept of trust is seen as a framework that causes and allows the unfolding of employee competencies. This given, the model takes a combined view on the concept of trust and the concept of competence utilization. Not before the behavioral part is included competence utilization is visible throughout a positively performed action. Based on the development of the new integrative model the successive verbalization of the research question as well as the definition of the respective hypothesis follows.

2.4 VERBALIZATION OF THE RESEARCH QUESTION AND LIMITATION OF SCOPE

The research question is intended to clarify and specify. It helps to consider what you really want to know.[319] The research question states the specific line of enquiry the research will investigate and attempt to answer.[320] For the research study the concept of trust builds the central point. Shouldn't it be the strategic goal of each organization to work on a resource that bypasses financial efforts and grows through usage? If trust is not just a harmony concept but functions as a catalyzer that releases potentials otherwise not available, it should be of interest to empirically test on this phenomenon within the organizational context. The illustration of the research question the topic is focused on is shown as follows.
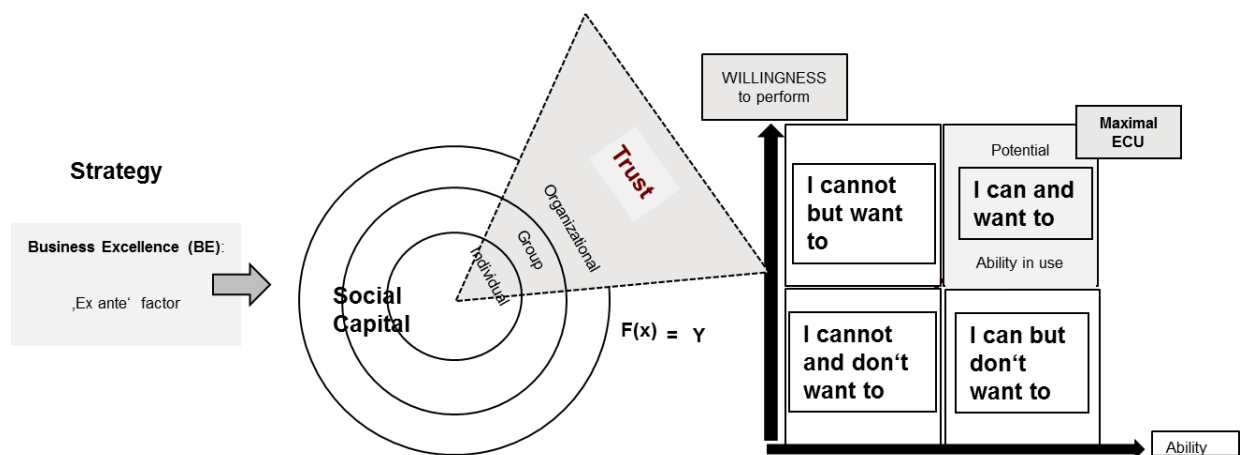
Figure 2. 9 Illustration of the research question

Source: Author's illustration

The corresponding verbalization of the research question is as follows:

'Does trust perceived by an employee towards management lead to a higher utilization of the own competencies?'

This question is embedded in an organizational context and considered in the framework of a business excellence setting and will be accompanied by the following sub-questions:

'Which aspects of the chosen trust concept do have the strongest impact on employee competence utilization?'

'Do the results support the integration of trust action into the model?'

'Shall the mission of strategic business management be the creation of mutual trust?'

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[319] Miles & Huberman (1994), p. 25
[320] Collis & Hussey (2009), p.117

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'Is business excellence to be seen as a system that positively impacts the creation of mutual trust?'

The main research questions build the basis for the main empirical study directed to employees. The sub-questions are touched throughout the pilot study, the interviews directed to management, as well as the final interview section with experts in the field. In order to specify the research question precisely some restrictions have to be made.

The main thesis focusses on the impact of trust on employee competence utilization. Other factors will not be tested. With the focus on the aspect of competence utilization, willingness on the part of the employees was perceived as a matter of choice. An adequate level of ability required to carry out the job is taken as given. In analyzing the correlation between trust and employee competence utilization the study sub-states that the employees are already in the company. The selection process is excluded from this research study. Further to this it is assumed that the employees match the requirements of the company as they have been chosen adequately in advance. The question rather is: 'How can the existing competencies being used efficiently? Based on the skilled worker shortage mainly driven by employed academics facing retirement age and a dramatic scarcity of junior employees, the achievement of long term retention is the target. The thinkable risk of disadvantages through a constant workforce is not taken into account as it is seen to be of minor influence. It still remains in all situations in the manager's freedom of action to select employees through dismissal. Limitations to the results are purposely given by the industry focus and the contextual frame of business excellence. The territory is furthermore bounded to companies that have implemented a Business excellence system. The focus furthermore is made on medium sized manufacturing companies in the range of about 50 to 1000 employees. Huge enterprises and service providing companies are not included. The study is furthermore focused on Germany. Therefore the impact of different cultures in different countries will not be taken into account, although the impact of cultural dimensions is recognized to be important in trust research.[321] As a choice the direction of the trust process was measured unidirectionally, supplemented by a second evaluation on management level. The concept reflects on trust between management and employees, considering both personal trust and organizational trust mechanism. Neither personal characteristics of involved people have been taken into account; nor were time effects on trust involved. Doing so, consideration of different personalities will be clearly excluded from the study, although the general impact is not denied.

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[321] Lyon (2012), p. 11, see also Schoorman, 2007

For the research paper at hand the aspect of risk taking behavior is essential as trust is analyzed with respect to employee competence utilization. Competence utilization per definition requires the notion on action and performance. Finally and with this aspect again touching on the general attitudinal approach of this research paper at hand, there is a clear relation to the higher quality levels of trust and with this the perspective of choice is related to the homo reciprocans. Along with this it is assumed that in general people want to grow and develop because it is a basic human drive. [322] The small percentage of employees that don't have interest to perform [323] is neglected on purpose in this research. Furthermore there is still no consensus if trust is an independent or dependent variable. There are indications that it might even to be seen in a loop process. A restriction is also made to intra-organizational trust and therefore inter-organizational trust is excluded. Nevertheless, within the viewpoint of intra-organizational trust, the referent of trust in the organizational frame may be either another individual, which is in the case of this research paper the Management of the organization or a collective (either a team or group or the organization itself). [324] Finally different hierarchical levels, gender and age as well as time effects are not taken into account.

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[322] Pryce-Jones (2010), p. 185
[323] Schmitz (2005), p. 53
[324] Lyon (2012), article of Gillespie, Nicole, p. 176 in line with the description of Gillespie

3 EMPIRICAL STUDY OF THE IMPACT OF TRUST ON EMPLOYEE COMPETENCE UTILIZATION AND THE INTERPRETATION OF ITS RESULTS

Chapter 3 follows with the presentation of the empirical study. Interviews of management and employee questionnaires are explained in their mixed methodological approach and with respect to the empirical proceedings. This chapter concentrates on the results of the empirical steps in order to illuminate the correlation between trust and employee competence utilization. Based on a combined view of the empirical results and theoretical insights the closure of the knowledge gap is approached. Reflections on learnings, limitations and downsides are referred back to theory as well as being challenged by experts in the field of business excellence, trust and competencies. Finally in the last part of the dissertation all points are brought together in the conclusion together with implications for practice and suggestions for strategic management and further research.

3.1 APPLYING MIXED METHODS TO TEST THE RESEARCH SUBJECT EMPIRICALLY

In reality observation cannot provide ultimate evidence because of human beings' cognitive limitation. Based on a subjective theory, a content based hypothesis can be expressed and transferred to a statistical assumption. This statistical hypothesis prognoses the result of the empirical testing and gives an explanation of the effect to be investigated.[325] In order to test this hypothesis a sample of reality has to be taken and analyzed. The underlying research philosophy chosen to close the knowledge gap influences the specification, method and the respective paradigm that is applied to the research.[326] The paradigm of this research is to be found in-between the two extremes of the scale of positivism and interpretivism. The fundamental approach is positivistic in so far as a theoretical framework is developed first which leads to a subsequent hypothesis. But in order to cross divide between qualitative and quantitative and

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[325] Bortz & Döring (2006), p. 23

[326] Collis & Hussey (2009), p. 55, a *differentiation has to be made between Positivism: critical rationalism, quantitative, the reality exists objectively. Conducted in natural sciences positivm is underpinned by the belief that reality is independent of us and the goal is the discovery of theory based on empirical research. Theories provide explanations establishing causal relationships between variables. Interpretivism: is underpinned by the belief that social reality is not objective but highly subjective because it is shaped by our perceptions. Interpretivism focusses on exploring the complexity of social phenomenia with a view to gaining interpretive understanding. Rather than adapting quantitative methods interpretivists adapt more likely different qualitative methods. There are a number of paradigms being found in between the two ends of the scale between prositivm and interpretivism.*

positivist and non-positivist [327] the preferential way of this research study is to analyze the data in a quantitative manner and complement those results with quantitative and qualitative elements from additional analysis. This should be understood as a balanced pluralistic approach.[328] In the consequence this research follows a pragmatic approach and makes use of mixed methods in order to cope with the complex and dynamic character of trust and competencies. Further to this the purpose of this research study is analytical in its main empirical part.

Taking the mixed approach the research study allows the comparison of results by focusing on a quantitative survey in the main empirical section, albeit selecting participating communities through qualitative and quantitative data. With respect to qualitative data the intention was to gain the benefit of their' richness and holism' and 'to go far beyond snapshots'.[329] On the other hand quantitative data were necessary in order to make data measurable and comparable. The high standardization and the possible statistical analysis of the main empirical section allow the review of data gathered. As a result the main focus is made on the differentiated statistical analysis of data. The combination of qualitative and quantitative data is also supported by related literature. Lyon et al. state that trust research prevents methodological hubris more than other fields as 'it constantly reminds us that no method can provide the perfect understanding of a phenomenon'. Reflecting on different methods used in trust research, they further state, that traditions of qualitative research have been particularly important for shedding light on the process of building trust and theory. Qualitative methods thus are found in both inductive and deductive approaches. In contrast a wide range of quantitative trust scales and measures have been explored using surveys of real-world-situations or through laboratory experiments, also questionnaire surveys have often been used to explore all elements of trust research. However as Lyon et al. point out, a mix of quantitative and qualitative methods is arguably better, since it allows the appreciation of values of different approaches and achieves quantification of results at the same time.,[330] The basic classification of the research study with regard to paradigm, purpose and methodology given, is shown in the following illustration, reflecting on a stepwise approach applied to this research study.

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[327] Collis & Hussey (2009), p. 66, here he refers to Curran and Blackburn, 2001, p. 123

[328] Johnson & Onwuegbuzie, Anthony, J. (2004), p. 16: the pragmatic method states that the current meaning or provisional truth value of an expression is to be determined by the experience of practical consequences of belief in use of expression in the world. Here Johnson et al. refer to James 1995, Murphy 1990. The approach combines elements of modern positivists as regards to confirmation and falsification as well as the impact of realism. This research is evaluated as most helpful for the research work at hand.

[329] Miles & Huberman (1994), p. 10

[330] Lyon (2012), p.1: Lyon Fergus, Möllering, Guido and Saunders, Mark, p. 7-13
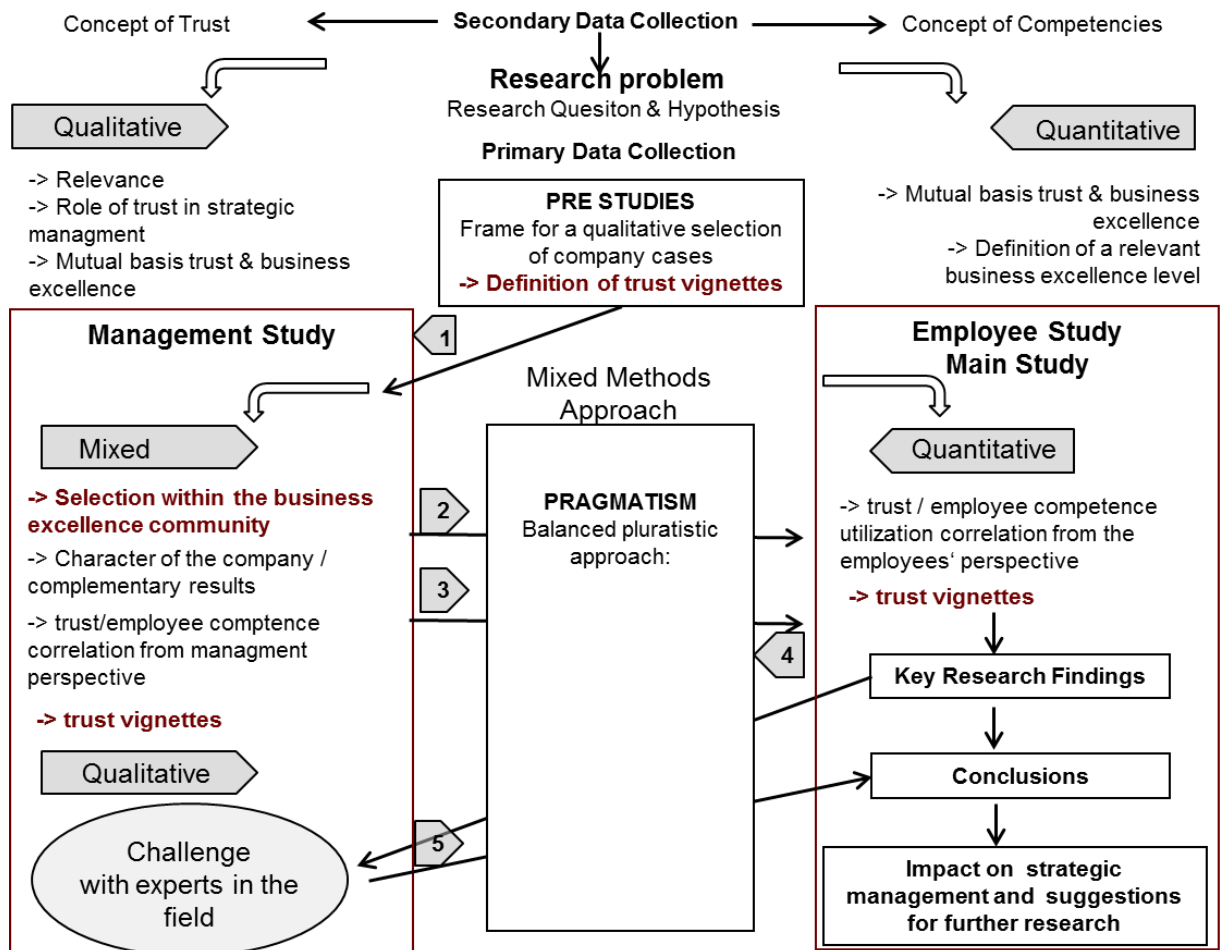
Figure 3. 1 Basic methodological approach of the research study

Source: Author's Model

As shown in the diagram, in a first step the relevance of the topic is shown by literature analysis. Based on the assumption that employee competence utilization generally increases the competitive advantage of a company and that a culture of trust is the appropriate approach to realize this potential, the basic underlying theories have been reflected.

In order to prepare the subsequent main empirical study and to further approach the concrete situation to which the research question should be directed experts in the field were approached in the next step. Based on two pilot studies executed pre ante the relevance of trust within strategic management (company managers and institutes) and the mutual basis between a culture of trust and the philosophy of business excellence (experts in the business excellence field) was approached exploratory.

With the intention of embedding the topic within the organizational context and further to place it within the business excellence field those two studies allowed a further specification of

the approach. Both pre-studies founded the basis for a strategic approach and the positioning of the main empirical study within the business excellence environment.

Another outcome of the pre-studies was the decision to base the selection of companies, for the main empirical study on a qualitative approach. On this basis the companies finally involved in the main study were well defined and selected. A major criterion was the involvement in a special business-excellence-circle. The procedure again was based on a stepwise approach. In a first step semi-structured interviews were executed with managing directors and chief executive managers of medium sized companies in Germany, all being part of the business excellence community. The motivation for this investigation basically referred to the selection of companies to be involved in the subsequent quantitative study. A personal interview approach was chosen in order to evaluate and motivate management to take part in the study. But essentially the management interviews focused on the question of whether the respective companies complied with the chosen standards of a business excellence context. Further to this the investigation was intended to support the establishment of a comprehensive qualitative evaluation of the character of the respective company. Based on semi-structured questions, the results of the quantitative part of the survey were valuable as a comparison to results deduced from the employee questionnaire. Thus the evaluation of the management's perspective of their employees' level of trust towards themselves and the organization was used as a supplementary viewpoint of the topic.

The employee questionnaire was executed in a further step with the selected companies' employees on a purely quantitative basis: this built the core of the empirical study. It is important to mention that the quantitative questions also included reflections on the 'trust-vignettes' exploratively developed in a qualitative manner throughout the pilot studies and the management interviews previously carried out. Here again the mixed method was applied.

Finally reflections and implications of the results and conclusions were discussed in open interviews with experts in the field. This approach is also to be seen as a contribution of qualitative elements towards quantitative results. Based on these comprehensive results a final assessment has been made and the key research findings and conclusions have been formulated.

Dependent on this description the logic of the main empirical research is deductive; a conceptual and theoretical structure is developed and then tested through empirical observations. The selected lines of theory and the underlying conceptualizations of the research study are concluded in a structural equation model which is tested empirically.

As final proof is not possible, the test in real situations is intended to improve existing theories with the help of falsification.[331] But also falsification is bound to special test criteria if hypotheses are probabilistic as usual in social sciences. As Bortz points out, different to natural sciences, the test on hypothesis in social and human sciences does not imply that the 'if-then'-sentence does perfectly fit to each sentence; it rather says that the argued relations between variables exist in principle. Therefore hypothesis in social sciences do have the character of probability statements; deterministic relations, as being used in natural sciences are not applicable for many phenomenon.[332] For this reason a number of considerations have to be made with respect to the expected results and its interpretation.

First, there is no perfect model, because a model is by its very definition a simplification of reality. As Moksony explains, models purposely stress and magnify some aspects of the world, while paying little or no attention to others. Every model tests on a different theories and reflects the particular emphasis of this theory. For this reason a model cannot only be challenged on the basis of the resulting coefficients of determination but also needs theoretical reasoning.[333] With respect to the research study, based on the literature review as well as on the results of the first pilot studies, the assumption has been made that the concepts of trust and competencies are a valid basis for successful organizational work although they are taken out of a bunch of other elements which are part of internal organizational work. Consequently the other elements are not under research. However the context is embedded in an external environment, characterized by competition, technological development, new substitution products in the field, to name but a few. Also internal factors besides the resource of social capital have influence on intra-organizational correlations. Here the qualification level of employees as well as other resources like technology, the structure of the organization and the systems in place should be named. As a consequence statistical results have to be interpreted against the background that the chosen model can always only touch on a section of reality. Therefore it is not expected that trust is the only and major cause for changes in employee competence utilization. However a significant positive correlation is assumed. In any case results have to be challenged and interpreted along with the theoretical insights being established previously.

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[331] Schneider (2006) Falsification as a principle of Karl Popper has been integrated to the critical rationalism. Falsification: the reality is a product of our mind and phantasy, it is a social construct (phenomenology). Falsification is related to critical rationalism. Within the quantitative positivistic approach data validity is higher compared to qualitative approach which accounts for higher reliability.
[332] Bortz & Döring (2006), p. 10
[333] Moksony (1990), p. 6, here he refers also to King, 1991, p. 1048

Second, and despite from the limitations caused by the non-achievable ultimate perfection of the model, statistical measures are highly respected also in social sciences. In order to assess the theory the regression coefficient is of effect. There are different sources reflecting on general ranges of the correlation coefficient R and its respective interpretation. As Brosius points out, consensus is given to the fact, that the observable linear relation is so much the stronger, the higher the measured correlation coefficient is.[334] Based on Collis and Brosius, the general interpretation of correlations coefficients is roughly graded as follows: 0.90 to 0,99 (very high positive correlation), 0.70 to 0.89 (high positive correlation), 0.40 to 0.69 (medium positive correlation), 0 to 0.39 (low positive correlation).[335] But Brosius also underlines, that not necessarily the grade is decisive for the interpretation of results: 'often it is more important that a positive or negative correlation between the monitored variables at all is existent and that this correlation is significant'. Further to this, interpreting correlation coefficients has to be made carefully since correlation between two variables does not prove the existence of a causal link between them. Basically also a strong correlation does not proof a causal relationship, as it is thinkable that two variables move into the same direction just because being impacted by a third variable.[336] As a result, Atteslander emphasizes, that the correlations can be shown statistically, whereas the formulation of causal relations is reserved for theoretical considerations.[337] R square (r^2) is the coefficient of determination that describes the proportion of variance in the dependent variable explained by the variance in the independent variable. R^2 is seen a general measure of the usefulness of the regression model. It indicates how well the statistical model explains variation in the dependent variable.[338] But again, as being said with regard to the correlation coefficient, this is a statistical explanation which has to be handled with care and needs to be enriched by a substantive explanation testing theory. Even more a low r^2 indicates merely that the dependent variable is affected by a number of other factors in addition to the ones considered in the analysis.[339] In other words; a low r^2-value suggests the need to identify additional predictor

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[334] Brosius (2013), p. 523, R is a correlation coefficient ranging from -1 to +1 showing the strength of a relationship between a dependent (or outcome) variable and one or more independent variables. The direction of the correlation is positive if both variables increase together, but it is negative if one variable increases if the other decreases. The strength of the correlation is measured by the size of the correlation coefficient: 1 represents a perfect positive linear association and 0 represents no linear association, whereas -1 represents a perfect negative linear association.

[335] Collis & Hussey (2009), p. 268, more roughly: < 0,3 low, < 0,7 medium, < 1,0 high correlation. See also Brosius, p. 523

[336] Brosius (2013), p. 523

[337] Atteslander & Cromm (2000), p. 339

[338] Nardi (2006), p. 93, 147 , In a purely statistical sense the r-square indicates how much of the variance in the dependent variable is produced by its relationship with the independent variable.

[339] Moksony (1990), p. 2,3

variables;[340] an interpretation that is not surprising as the intention is to establish a model based on a particular causal relationship, not to prepare a full list of the various causes of a phenomenon.[341] Consequently with respect to the research study r² is not expected to be high as trust has purposely been taken out of a bunch of other impact factors.

Further to this it lies in the nature of human beings that behavior is simultaneously influenced by multiple variables. As Bortz states, the causality of variability of characteristic attributes in human and social research is typically not only dependent on one variable but on multiple variables.[342] Including more than one variable in statistical models, researchers can create more sophisticated models to predict or explain social behavior. In social and human sciences research objects are characterized through individuality, complexity and consciousness, resulting in various particularities in content and method compared to natural sciences. Multi-causal explanations need a variety of action modes to understand 'cause-effect'-relations. The variability of the dependent variable has to be divided in shares being impacted by a number of independent variables. As Bortz states, consequently the argued relationship between the dependent and the independent variable may not be perfect in many cases.[343] And since in social sciences, so far, no deterministic theories have been developed unlike in the natural sciences, empirical correlations in social and human science tend to be stochastic, which means usually lower than in natural sciences.[344] This is another reason that special test criteria are important and that the most important criteria are seen in the statistical significance.[345] This is due to the complexity of social science theories based on human behavior.

Finally models with multiple variables imply the risk of multi-collinearity. Multi-collinearity can make it very hard to identify the separate effects of the independent variables. As Collis explains, this occurs when the correlation between independent variables in a multiple regression model is very high (> 0,9).[346] Therefore it is not an easy task to interpret high or low values of r², as the relative explanatory power of variables is divided unequivocally among them,

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[340] Mokhlis (2014), p. 409

[341] Moksony (1990), p. 3, He even explains: the coefficient of determination is, in essence, a mixture of three factors: the impact of the explanatory variable, the degree of variation in this variable, and, finally, the size of the spread around the regression line.

[342] Bortz & Döring (2006), p. 11

[343] Bortz & Döring (2006), p. 11

[344] Argyris & Schön (1978-c1996), p. 24ff, see also Rosenstiel, Lutz von, p. 115ff, Max Weber, Wirtschaft und Gesellschaft,,1964,S.27f.; Deterministic theories in natural science: e.g. the law of gravity/Newton, Einstein's theory of relativity, various theories in mechanics and physics in general.

[345] Bortz & Döring (2006), p. 10, As empirical data cannot absolutely be verified or falsified against hypothesis, one of the most important test criteria is the statistical significance.

[346] Collis & Hussey (2009), p. 272

influenced by possible correlations between variables, so that there is also a portion they share with one another and that therefore cannot legitimately be assigned to any of them. But Collis also states, result not being higher than r = 0,7 do not show a strength of correlation that can be expected to cause a problem in using multiple regression.[347] This research study is mainly consolidated on correlation analysis not on regression analysis; multi-collinearity is therefore not seen to be a major issue as other than correlation coefficients of the single indicators cannot be added. Based on these considerations the arguable room to maneuver for this research study is shown in the following diagram.
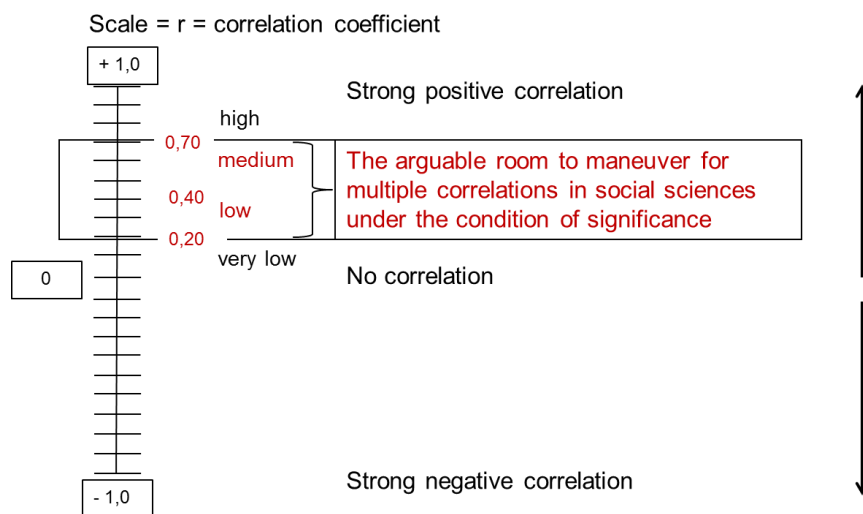
Figure 3. 2 The arguable and expected correlation coefficient in social sciences

Source: Author's illustration based on Collis[348] and Brosius [349]

Based on the sociological background and the complexity of the trust concept a medium to low but positive and significant correlation would be expected. A correlation coefficient higher than 0,7 may not be assumed, which implies the positive effect that the risk of multi-collenarity is arguable. Further to this theoretical results support the idea that trust never can and should not be the only impact factor as elements of control and distrust should always be involved in order to avoid blind trust (see chapter 1.3.2). Also as mentioned before, strategic management is embedded in internal and external factors, influenced by macro- and microenvironment that are expected to significantly impact the 'ability in use' as well. Therefore a medium or low correlation coefficient has to be expected. For the research study a correlation coefficient between 0,20 and 0,60 is seen to be acceptable and not unrealistic as long as it can be substantiated with theory or qualitative research results. As for any research the interdependence

[347] Moksony (1990), p. 3
[348] Collis & Hussey (2009), p. 268
[349] Brosius (2013), p. 523

of method and theory[350] is also valid for this research study. As argued before not necessarily the grade is decisive for the interpretation of results, but also a positive and significant correlation between the monitored variables exists. It will be essential to evaluate the results towards theory and deliberated as to whether additional qualitative and quantitative insights from the research study lead to further differentiated and specified outcomes. Thus the underlying propositions have to be analyzed in comparatively approach towards the statements, not only focusing on absolute numbers. With this intention various propositions were developed and further sub-questions had to be answered additionally.

3.2 SELECTION OF COMPANIES AND EXCECUTING MANAGEMENT INTERVIEWS AND EMPLOYEE QUESTIONNAIRES

'The choice to whom to look at or talk with, were, when about what and why are points that should be considered with regard to the empirical design.' The company cases finally involved in the main study were well defined and consciously selected. They were not randomly chosen. Based on the particular industry context and the results of the pilot-studies a fundamental knowledge of the particularity of the population was given. In line with this, the sampling procedure was based on a qualitative approach. Besides the criterions of country, industry focus, and company size the specific selection was based on a qualitative assessment. In particular the companies were selected from a business excellence community working on a specific quality systems level. These companies meet once a year at a symposium in Germany. The total community addressed by the organizers of the conference is 16000 business excellence experts working in manufacturing companies all over Germany. In March 2014, 60 participants joined the conference, of which 35 filled in the business excellence questionnaire executed within the pre-study. Representing a cross-section of all branches in the manufacturing industry these companies tried to interconnect and get to know each other. Already accustomed to a basic level and knowledge of quality systems their intention was to extend their knowledge and gain from interdisciplinary exchange. All companies within this community were invited to participate in the main study. As a consequence a major criterion was the establishment in the special business excellence circle and the subsequent proof of a required quality systems level. As a result the overall qualitative approach was accompanied by elements of a stratified approach. The fragmentation of the sample was based on parameters well known with respect to the whole

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[350] Friedrichs (1990), p. 60

population. Based on a sound knowledge of the population it is arguable that the number of cases necessary for the research study is significantly lower than a purely random sample. In this respect a stratified sample is a particular sort of random sample. The sound knowledge of the chosen population of the research area allows a qualitative selection approach based on special parameters. All individual samples within this specified community have the same probability of being chosen.[351] In the course of discussions with these companies a number of 11 companies agreed to a comprehensive interview. (From the original number of 12 one company stepped out in the first phase of the study). Six of these in turn participated in the subsequent comprehensive employee questionnaire. The basic empirical design is shown in the following diagram.
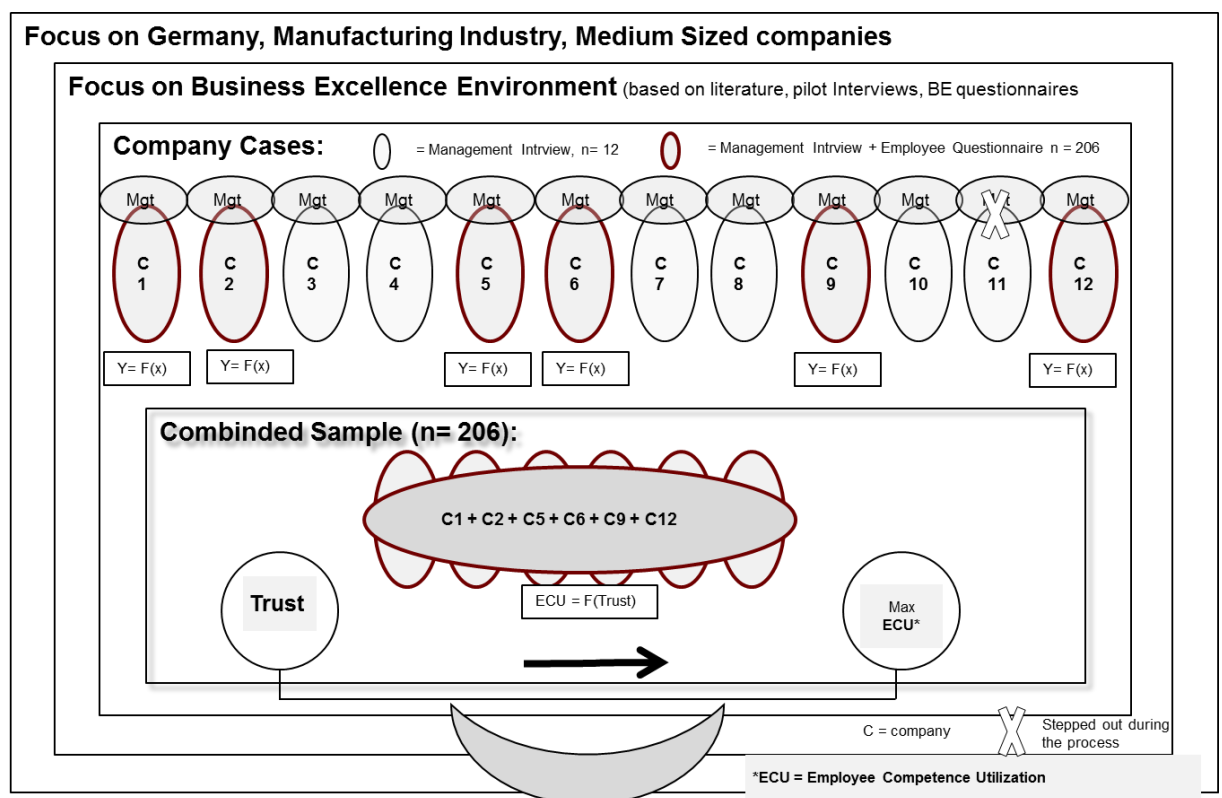
Figure 3. 3 Empirical design of the main empirical study

Source: Author's model

All companies finally involved were medium-sized companies with approximately 50 – 1000 employees. Branches represented the fields of medical, furniture, household systems, telecommunication, and mechanical engineering. The interviews were of managing directors and chief executive mangers of the respective companies. Throughout these interviews the level of

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[351] Collis & Hussey (2009), p. 212

business excellence implementation aspects was challenged individually. Based on the results it was decided whether the companies fulfilled the criteria to participate in the study. The intention was to make additional assessment further to their participation at the conference. Having been asked a number of questions towards the goal development process, responsibility and failure culture, change and innovation processes as well as performance monitoring, results showed mean values of above 3 for all companies. This was based on a 1-5 scale, the optimum being 5. Based on the sufficient fulfillment of business excellence criteria the management of all companies was additionally asked to participate in the main empirical study directed at employees of the respective companies.

Due to the fact that the employee questionnaire was very comprehensive in terms of content and time demand the respective companies had to decide with their personal department, their union and with regard to their individual situation, whether they were willing and would have the resources to participate. The openness and courage required to answer the question of 'culture evaluation' in such an in depth deep way and face the possible results were motivating aspects and thus influenced the decision to participate. With the intended combination of interviews and a 'one-hundred question employee questionnaire', managers in the respective companies had to decide on the involvement of 20 to 50 employees per company in order to achieve a statistically valid number per each company. Although the empirical process was based on the summation of data of all companies involved, the specific answers for each single company were also of interest. The companies involved decided to participate in the study conscious of the participating companies' different backgrounds. One company was going through a takeover and was affected by an ownership change parallel to the decision phase and simply had to follow the rule that no employee questionnaires were allowed within this period. Another company, been through a similar process a year before. A third company was very successful within the respective timeframe, whereas another was exposed to high internal and external pressure. Again one company was facing the redundancy of a significant number of employees in the near future. Finally one company had already taken part in a comprehensive questionnaire shortly before so that the working union considered that another questionnaire would overload the employees. Those and other arguments were taken into account when deciding whether or not to go for the further empirical study. Finally six companies agreed to participate. Although their situations were so different, the deciding factor of whether to participate in the study was their deep interest in the results based on the conviction that the results are of relevance to the company. In all cases

the individual managers addressed in personal interviews is seen as the catalyzer for the respective companies' decision to participate. The decision to take part indicates intrinsic motivation and interest by management and might even be interpreted as symbol of a basic propensity towards trust. After all, the advantages of an individual approach were ranked as superior to the limited variety of companies compared to a random sample. Average results of all 11 companies and results per company are shown in the following table.

Table 3. 1 Business Excellence level per individual company compared to the average mean value

	Business excellence level evaluated by management per individual company						
	Company C 1	Company C 2	Company C 5	Company C 6	Company C 9	Company C 12	Compared to the average over all companies involved, n=11
	mean value per individual company						average mean value
Goal deployment process	3,5	4,25	4,25	3,75	4,5	4,5	3,8
Responsibility & failure culture	3	4,25	4,75	3	5	4,75	3,7
Change & Innovation	2,56	3,67	4,11	3	4,22	4,56	3,39
Performance monitoring	4	4	4	3	5	5	3,73

Source: Author's table based on main empirical study

All participating companies showed an over-average level of business excellence. With one exception all numbers are above 3. Also compared to the overall average value calculated based on all individual companies being involved, numbers are comparable or even higher. The level of business excellence shown here is seen as a condition for participation in further empirical testing within this research study. The defined level of business excellence may be seen as an argumentation for a possible generalization of results for other companies within the chosen territory as well. A generalization to medium-sized manufacturing companies on a comparable business excellence level can be assumed. Based on the described pre-selection the main empirical study was followed in order to test the correlation between trust and employee competence utilization.

In all, 206 employees took part in the survey. This number comprises of the collectivity of 20-50 employees of each respective company. Each employee answered an in-depth employee

questionnaire of more than 100 questions which composed the quantitative part of the study. The following table shows the respective companies' numbers whilst retaining their anonymity.

Table 3. 2 Specification of companies involved in the main empirical study

Company	Employee questionnaires per individual company	Sales per individual company	Employees per individual company
1	51		450**
2	48	370 Mio	1066**
3	0	200 Mio	700
4		100 Mio	1400
5	31	55 Mio	210**
6	49	300 Mio	100**
7		2,8 Mrd*	6500
8		1,4 Mrd*	1900
9	13	290 Mio	550**
10		150 Mio	400
11		322 Mio*	640
12	14	460 Mio *	860**
Total	n = 206	* total sales worldwide not site	

** total no of employees in the location

Source: Author's Table based on the main empirical study

As the management interviews and the employee questionnaires were on the condition of anonymity, there is no detailed description of the companies. Nevertheless, and in addition to the well-defined characteristics of the chosen population the companies can be described in their character. Throughout the management study the respective management was asked: 'If your organization where a person, could you describe its character today and in 10 years from now? The answers are presented in the diagram below.

C1 **Today:** • High motivation & relatedness • Change in leadership style from autocratic to cooperative • High uncertaintly **In 10 years:** • Center of Excellence • Culture of Trust • Hierachies are not anly longer noticeable	C2 **Today:** • Cooperative • High relatedness • Change from big sized company to medium size **In 10 years:** • 'We are still we' • Successful in the market • Satisfied customers	C5 **Today:** • Relatedness • Trust • Stable overal Situation • The human itsefl is treasurd **In 10 years:** • Our character remains • Growth through quantitiy and new products

If your organization where a person, how would you describe its character today and in 10 years from now?

C6 **Today:** • Strong customer orientation • Consens orientation • High intrinsic motivation • Guidance based on strength **In 10 years:** • Our character remains • Higher professionalism and process orientation • Growth may lead to higher hierarchy	C9 **Today:** • Familiar athmosphere • Innovative, visionary • Trustfull • Commited, connnected, curious **In 10 years:** • Innovation is decisive • The human is central • Innovation and diversification • Develoopment of new products and markets	C12 **Today:** • Hard workig, honest, wiling to improve • Mature, self-directed • Highly concentrated specialist • Proudful please the customer **In 10 years:** • Internationalization on the basis of sustainalbe values • Take more time for issues • Mixture of cultures leads to increasing innvotive demand

Figure 3. 4 Approaching the character of the involved companies - qualitative results of the management survey

Source: Author's figure based on empirical results

Notably three of six companies emphasized that their character should remain as it was. Although management interviews showed that at least three companies underwent essential organizational change or were currently confronted with significant insecurities (C1, C2, C9), they were obviously satisfied with their current character. Two companies specifically said that their culture was one based on trust. Three companies referred to relatedness as a particular characteristic; a characteristic being very close to commitment.

The focal point is the overall evaluation of 206 employees of all participating companies. This decision was made with respect to a critical sample size with regard to a reliable statistical evaluation. The significance and generality of the results are also expected to be higher in a cross-sectional approach compared with a separate analysis of each respective company. Nevertheless the empirical analysis was also carried out separately for each company, with neutral presentation of results ensured. This comparison was intended to provide a benchmark view of the companies as well as challenging the results of each single company with respect to the whole sample entity.

In order to decide on the execution, the method of gathering information had to be defined and technical choices had to be made.'[352] For the management survey a personally directed interview was the instrument of data collection. The time period needed was between one and two hours. The interview was organized in a semi-structured form in a combination of open and closed questions. Notes were taken during the interview in written form and at the end of the interview confirmed by the respective interviewee. With respect to qualitative data the intention was to gain insight in the character of the company. On the other hand quantitative data were necessary in order to allow the comparison of management and employee results as well as between companies. Further to this the quantitative part of the management survey was directed to a consecutive analysis of the management's perception of employee trust and employee competence utilization level. Both managers and employees had to answer questions regarding trust and employee competence utilization. However the emphasis of the quantitative questions was on the economic company data expected to be unknown by employees in the same detail as management. As shown before participation in the survey implied a certain dedication to the topic. Management had far more information on the specific nature and basic question of the research study than employees. They also had strategically interest in the results. In contrast employees did not have precise information on the research question or the underlying hypothesis. Consequently they could not be aware of the attribution of single questions to the variables of trust and employee competence utilization; neither had they had the chance to reflect on the implications of their answer.

For the employee survey a written online self-completion questionnaire was the preferable instrument of data collection. The time period needed for completion was between 20 and 30 minutes. Questionnaires answered in paper version were subsequently transferred into the online system. The questionnaires directed at the employees of each respective company were purely quantitative and based on closed questions which always gave indications of how to answer and how many answers were possible for each question. This was done with the intention of gaining the highest possible number of responses in a justifiable time frame. Furthermore this approach contributed to the target of the highest applicable comparability between the companies. The employee survey was made under the condition of anonymity. A number of between 20-50 employees per company was targeted. The employee questionnaire was designed to provide an answer to the research question.

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[352] Miles & Huberman (1994), p.34,35

Each question of the respective interview and questionnaire has been developed with respect to a single variable and its corresponding indicators. Also all theoretical terms are exemplified in the interview line and questionnaires as well as all areas of chosen definitions for both, the independent indicators of trust as well for the dependent indicators of employee competence utilization are touched. The process applied to the interview and the corresponding employee questionnaire was the same. All indicators of the latent variable trust and employee competence utilization have been transferred in an underlying hypothesis statement followed by single questions. The fragments of the underlying hypothesis are shown in the following table. [353]

Table 3. 3 Basic hypothesis and its underlying elements

Hypothesis	
…- the higher the establishment of trust	**… - the better the utization of competencies**
The higher the feeling to be treated fair -	**the longer the employee stays in the company**
The higher the accountability of the contact person -	**the longer the employee stays in the company**
The higher the feeling of honesty -	
The better the promise keeping -	**the higher the overobligatory performance**
The better the confidence that confident information is secured -	**the higher the commitment to the organization**
The higher the feeling on mutual fairness -	the higher the compliance with organization goals
The more fair the handling of critism -	the higher the own self assuredness
The higher the confidence -	the higher the pride in the organization
The higher the confidence in the competence of the contact person -	the better the relation to the organization
The higher the confidence in good will of the contact person -	the better the acceptace within the organization
The higher the confidence in the moral integrity of the contact person -	**the higher the engagement within the organization -**
The higher the sucurity in the handing in case of a failure -	the higher the willingness to go the extra mile -
The higher the feeling of justice -	the higher the joy to discover
	the higher the desire to get better and better
The better articulated the goals -	
The better the visibility of goals -	**the higher the productivity per employee**
The more clear the allocation of resources is -	the higher the percentage of positive finalized taks
The better the acceptance of goals -	the higher the number of improvement proposals
The more existing norms are shared -	the higher the effect of learning and growing
	the higher the accuracy in self assessment
The higher the network possibility within the company -	**the higher the number of patents**
The better the establishment of network structures -	the higher the number of continuuous improvement processes
The more frequent the communication -	the higher the number of new processes
The more open the communication is -	
The better the permeabiltiy in hierarchy -	**the higher the level of satisfaction**
The better the information symmetrics -	**the higher the feeling of meaningfulness of the own work**
	the higher the intrinsic motivation
The higher the delegation levels -	the better the balance of needs
The higher the degree to make decisions -	the higher the feeling of recognition
The lower the degree of control - the higher the feeling of involvment	**the higher the possibility of contiuous qualification**
The higher the responsibilty for the own task -	

Source: Author's table

The first part of the questionnaire dealt with trust patterns, the second part investigated employee competence utilization, and the third and final part was directed at the business excellence field. The design of the semi-structured interviews and the employee questionnaires was harmonized in order to ensure a comparison between answers of managers and the respective

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[353] Bolzern-Konrad & Sumilo (2014b), p. 1133, this part has been published

employees of each company. With regard to the quantitative questions all had the same structure. In order to fulfill the requirements of elaborated statistical methods interval scales have been used.[354] These scales were implemented in the form of 'end-point-based' verbalization combined with a specific scale number in a range from 1 to 5. The verbalization allows a common understanding of how the scale points should be interpreted.[355] The 'end-point-completion' allows scales with more than 3 or 4 scale points, whereas the specific scale numbers allow concurrent good conditions for statistical analysis.[356] All scales have been realized with 5 scale points. Although the middle category implies the risk of 'escape decision it reduces the risk of item-non responsiveness. The scale is defined with 5 scale points so that the combination of end-point based scales and verbalization is seen with an optimum of between 4 and 6 scale points[357]. Having made the decision for an uneven scale, 5 scale points was the logical consequence. The scale direction is clearly shown through visual presented scales with a reading direction from left to right, which reflects the usual way of thinking. In most cases the scales are one-dimensional. The chosen interval scales either represented a value between 1 and 5 or an end-point based verbalization being transferred to intervals from 1 to 5. For further details Appendix 3 shows the management interview and Appendix 4 shows the employee questionnaire.

To summarize, the management study was a door opener for the employee study because the established relationship developed confidence and meaningfulness towards the main study. The results of the study also contributed to the qualitative selection process with regards to the companies finally involved in the employee study. Furthermore the combination of quantitative and qualitative results gives additional supporting insight compared to a pure quantitative study and with this contributes to the mixed method approach. Further to the evaluation of the business excellence level the target was the analysis of the correlation between trust indicators and indicators for employee competence utilization. Indicators for employee competence utilization were explicitly reflected on and monitored in detail. Interestingly enough it was of further value to reflect on differences in the evaluation of management and their respective employees. Thus the evaluation of the management's perspective on the trust level of their employees towards management was used as a supplementary view on the topic.

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[354] Porst (2014), p. 75
[355] Porst (2014), p. 81
[356] Porst (2014), p. 83
[357] Porst (2014), p. 87

3.3   RESULTING DATA FROM THE EMPIRICAL STUDY AND ITS INTERPRETATION

The analysis of the employee study will first be shown. The upfront management study and the business excellence study will subsequently be shown in a combined view reflecting possible differences compared to the employee study. A brief overview comparing results of the individual companies involved in the study will also be given. Reflections and implications of the results and conclusions were discussed in open interviews with experts in the field in the 'final expert challenge'. The results of the main empirical study are focused on the employee survey executed within the community of employees of the selected companies on a purely quantitative basis. Results are shown along with the series of hypothesis and propositions previously defined which build the core of the empirical study. It is important to mention that the quantitative questions also included reflections on the 'trust-vignettes' explanatively developed before in a qualitative manner throughout the pilot studies and the management interviews. Here again the mixed method was applied. The survey took place between March and August 2014. All quantitative resulting data was filled in an online questionnaire system 'Questback' and is available in Excel as well as sav/port file of the IBM SPPS Statistics 21. The analysis was also executed with the statistical software of IBM SPSS 21. Based on the Shapiro-Wilk test normal distribution was rejected ($p < .05$). For further details see Appendix 5. Therefore, to explore the correlation between the variables, Spearman's rho, as the nonparametric measure of choice, was assessed.[358] Nevertheless with Spearman's rho been tested in the basic correlation analysis in the management and employee study also Pearson measurement is shown for a possible comparison.[359] The interdependence between trust and employee competence utilization was measured based on the correlation coefficient r in order to define the strength and direction of relationship between both variables. As a second measurement the coefficient of determination r^2

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[358] Collis (1994), p. 270, In general they explain, that if you have non-parametric data for two variables measured on a ratio, interval or ordinal scale, the correlation coefficient Spearman's rho can be used to measure the linear association between the variables. This overcomes the problem of data being non-parametric by placing data values in order of size and then examining differences in rankings of each variable compared to the other. Spearman's rank-order correlation coefficient is therefore a rank-based version of the Pearson's correlation coefficient. If parametric data for two continuous variables is available, Pearson's product-moment correlation coefficient can be used to measure the linear association between the variables. It must be based on a ration or interval scale where the data can take any value within a given range. Pearson's correlation coefficient is a common measure between two continuous variables. It is defined as the ratio of covariance of the two variables to the product of their respective standard deviation.

[359] Chok (2010), p. v,29, In this work it is mentioned that Pearson's correlation coefficient could offer a substantial improvement in statistical strength even for distributions with moderate skewness or excess kurtosis. This statement was made because Chok found that Pearson's correlation better reflects the degree of concordance and discordance of pairs of observations for some types of distribution. Disadvantages of the Person product moment correlation seem to be mostly due to its known sensitivity to outliers.

was calculated in order to explain the the proportion of variance in the dependent variable explained by the variance in the independent variables.[360]

3.3.1   QUANTITATIVE RESULTS OF THE EMPLOYEES' PERCEPTION OF TRUST TOWARDS MANAGEMENT AND ITS IMPACT ON EMPLOYEE COMPTENCE UTILIZATION

The figures below show the results of the main empirical study directed at the involved companies' employees. 206 employees took part in the survey comprising of about 100 questions. In total more than 20.000 answers from all employees were included in the study analyzed descriptively and correlated. The structure of the analysis follows the logic of the hypothesis and its respective propositions which have been previously developed. In order to give a first impression of the level measured with regard to the variables 'trust' and 'employee competence utilization' the following descriptive figures are shown.

Table 3. 4 Descriptive analysis on trust and employee competence utilization - employee survey

Descriptive Statistics Employees n=206					
	Trust	Trust-Fairness Level 1-5	Trust-Clear Goals Level 1-5	Trust –Networks Level 1-5	Trust-Delegation Level 1-5
Median	3,33	3,34	3,18	3,62	3,14
Mean	3,26	3,26	3,15	3,52	3,10
Descriptive Statistics Employees n=206					
(ECU = Employee competence utilization).	ECU	ECU – Retention Level 1-5	ECU – Overobligatory Performance Level 1-5	ECU – Productivity Level 1-5	ECU – Satisfaction Level 1-5
Median	3,49	5,00	3,76	3,00	3,17
Mean	3,40	3,90	3,72	2,93	3,05

Source: Author's table based on employee survey results

All scales are interval scales either represented a value between 1 and 5 or an end-point based verbalization being transferred to intervals from 1 to 5 (see Appendix 3). Within the group of 206 employees the mean level of trust and employee competence utilization is higher than 2,5 in all cases, which is seen as a clear above average result. These measurements are the same for the average of all questions as well as for the average of questions grouped along with the indicator groups such as fairness, clear goals, networks and delegation for trust and retention, over obligatory performance, productivity and satisfaction for the employee competence utilization part. It must be mentioned that the median for the retention indicator is 5, which is the

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[360] Nardi (2006), p. 93

highest possible score. It has to be assumed that this result was impacted by a slightly inappropriate scale. The scale in the questionnaire was chosen with a minimum of 1= <1 year (1-3 years, 4-5 years, 7-10 years) and a maximum of 5 = >10 years. With regard to the results of the management survey, stating that the average retention time of their employees is above 10 years and usually in a range of 20-30 years, obviously the scale used in the employee survey is not precise enough. Accordingly it may be assumed that the actual values would have been much higher and much more scattered if the scale had been chosen differently. Consequently the correlation between trust and retention should be seen in a different light and should not lead to the conclusion that there is no interrelation between both.

In order to evaluate trust and its relationship to employee competence utilization different levels of analysis were executed. On the highest level (level 1) according to the research model all questions concerning trust and all questions concerning employee competence utilization were correlated. This evaluation touches on the basis hypothesis H_B: *The higher the level of (perceived) trust, the higher the level of employee competence utilization.* The corresponding results are shown in the following table.

Table 3. 5 Correlation analysis trust - employee competence utilization – employee survey

Correlation T/E Employee (n=206)			
		Correlation coefficient = r	Coefficient of determination = r²
		ECU	ECU
Correlation / Spearman-Rho	Trust	**,455****	0,207**
Correlation / Pearson	Trust	,584**	0,341**

**. The correlation is on a level of 0,01 (2-sided) significant
*. The correlation is on a level of 0,05 (2-sided) significant

Source: Author's table based on employee survey results

Based on Spearman's rho the relationship between trust and employee competence utilization is positive with a strength of 0,455**. With regard to the classification of quantitative correlation results in social science, a correlation coefficient of r = 0,455, which is highly significant, should be seen as an acceptable medium-strength correlation. As a second measure to assess the impact of trust on employee competence utilization, the coefficient of determination r² was examined, resulting in a relative impact of the variance of trust on employee competence utilization at 20 % with r² = 0,202. Accordingly, based on a high significance of the correlation at a level of 0,01 two sided, a positive connection between trust and employee competence utilization outcomes is not falsified. On a pure statistical base this analysis can be interpreted as

saying that the perceived trust level based on the employees' evaluation shows an impact of 20 percent on the variances in employee competence utilization. The corresponding regression analysis (Scatterplot Diagram) based on the single numbers used above gives information on the linearity of the correlation. The dependency of the two variables is adapted to the linear regression equation curve. The resulting scatterplot diagram shows the dependent variable employee competence utilization in its adaption to the linear regression curve.
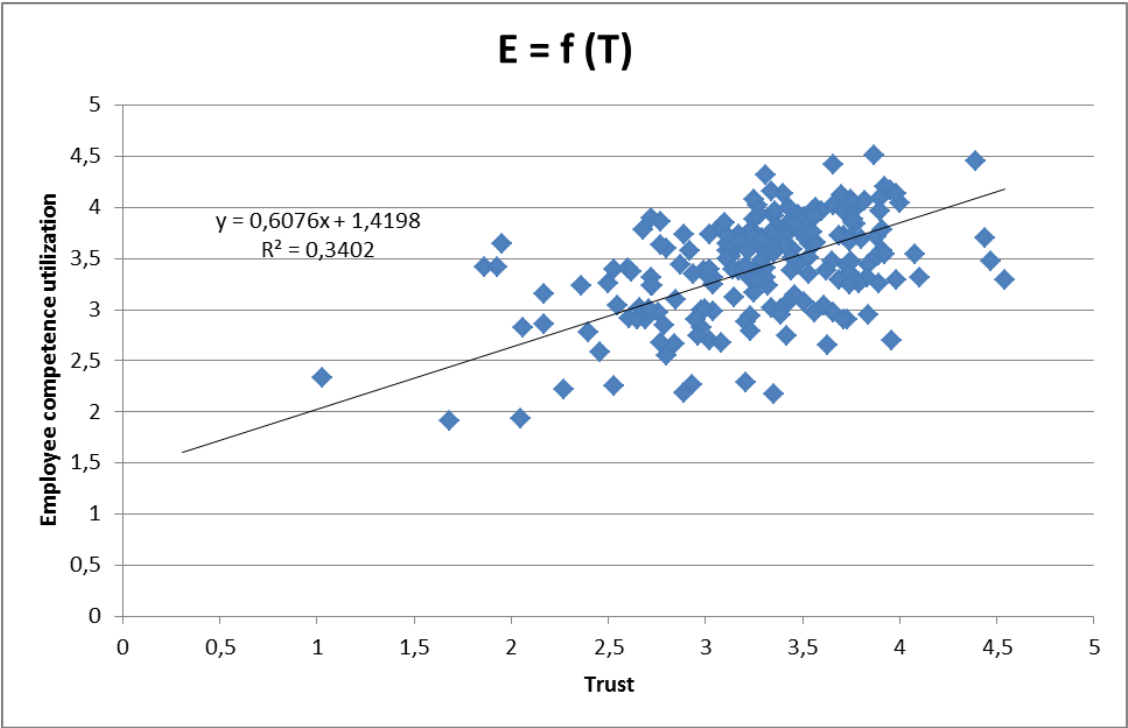
Figure 3. 5 Scatterplot diagram – trust - employee competence utilization - employee survey

Source: Author's figure based on employee survey results

The scatterplot diagram shows the distribution of the dependent variable 'employee competence utilization' (E = ECU) adapted to an estimated value of a linear regression. The respective numbers are shown in the following table. The parameter 'a' and 'b' are calculated to minimize the square sum of the deviation from the linear regression values.

Table 3. 6 Scatterplot diagram

Model	Non standardized coefficients		Standardized coefficients	T	Sig.
Regression y= a+bx	Regression Coefficient B	Standard-deviation	Beta		
1 (contant)	1,419	,196		7,245	,000
T	,608	,059	,584	10,266	,000

dependent variable = E

Source: Author's table based on employee survey results (SPPS)

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Numbers show a distribution of single values for employee competence utilization that is very close to the linear regression. Touching on the underlying propositions, the different elements of trust with regard to the character of the trustee, the network notion, the aspect of clear goals and transparency as well as the contextual elements are shown in their respective results. A summary is given as follows, for further details see Appendix 6.

Table 3. 7 Summary on correlation results – employee survey

Hypothesis / Proposition	Results: r = correlation coefficient
H$_B$: The higher the level of (perceived) trust, the higher the level of employee competence utilization	**YES, based on the underlying model and defined scope: r = 0,455**** The correlation between trust and employee competence utilization is positive, significant and of medium strength. General causality is supported by theory.
This level is acceptable for social sciences. Trust is not the only impact factor on employee competence utilization but builds a decisive basis. And, if trust is not existent, it can be expected that also all other factors are negatively impacted.	
P$_B$1: The higher the evaluation of personal characteristics, the higher the level of employee competence utilization	Personal characteristics are described as the basic predisposition towards another party and by the perceived trustworthiness towards the respective trustee:
P$_B$1.1: **The higher the personal predisposition for trust, the higher the level of trust**	**YES: r = 0,44**** The correlation between trustor's predisposition and his trust level is positive, significant and of medium strength
P$_B$1.2: **The higher the personal predisposition for trust, the higher the level of employee competence utilization**	**Maybe: r = 0,244**** The correlation between the trustor's predisposition and employee competence utilization is positive, significant and of low strength, but supported by theory
P$_B$1.3: **The higher the evaluation of the personal characteristics (trustworthiness) of the trustee by the trustor, the higher the level of employee competence utilization**	**YES, to trust: r = 0,675**** The correlation between trustworthiness and trust is positive, significant and high **Maybe to employee competence utilization: r = 0,265**** Correlation between trustworthiness and employee competence utilization is positive, significant and low; but causality is supported by theory
Theory supports that the predisposition to trust is a condition for trust development and that trustworthiness is an important part of the trust concept, Also in line with theory, benevolence ranks highest compared accountability, integrity and ability. The correlation between trustworthiness and employee competence utilization is positive, significant, but low. This underlines the assumption that personal characteristics are of importance but not the only impact factor for employee competence utilization. However, although being based on a low correlation, theory suggests that missing benevolence has the power to destroy the whole concept. Therefore its basic importance	

	cannot be neglected although based on low correlation strength.
P$_B$2: The higher the evaluation of relational characteristics, the higher the level of employee competence utilization	**Yes: r = 0,450**** Relationship elements are positive and significantly related to employee competence utilization on a medium level.

These findings underline the assumption that relations in form of experienced behavior are an important part of the trust concept; especially as relational trust is seen to be the most powerful form of trust.

P$_B$3: The higher the evaluation of situational/contextual factors, the higher the level of employee competence utilization	**Maybe: r = 0,196**** Contextual elements are positively and significantly related to employee competence utilization and on a low level, but supported by theory.

The focus is put on the question, if the allowance for self-directed action is given. This element, seen to be representative for the situational context, is positively and significantly correlated to employee competence utilization. Although the strength of correlation is low, the positive direction supports the theoretical based definition of competence utilization: 'ability in use'. Without allowance, performance cannot become visible. Therefore theory supports the integration of contextual elements strongly.

P$_B$4: The higher the level of all factors for trust, the higher the level of all factors of employee competence utilization	**Yes, major aspects identified:** Basically trust correlates the strongest with over obligatory performance **r = 0,637****and satisfaction **r = 0,779**** The correlation is positive, significant and on a strong medium level. In detail the strongest correlations can be found: Accountability -> intrinsic motivation: **r = 0,649**** accepted goals -> growth perspectives: **r = 0,601**** Shared norms -> commitment: **r = 0,596**** Communication -> intrinsic motivation: **r = 0,582**** Ability to take responsibility and intrinsic motivation: **r = 0,692****

Notably accountability, shared norms and the ability to take responsibility impact these outcomes predominately. Correlations towards productivity and retention are lower. The results of the management survey showed that the average retention time of their employees was above 10 years and usually within a range of 20-30 years: however the scale used didn't reflect the facts accurately. Accordingly it may be assumed that the actual values as well as the correlation would have been higher if the scale had been chosen differently.

P$_B$5: The higher the level of trust, the higher the level of innovation	**Maybe, for specific elements** All trust indicators are positive and significantly related to innovation , on a medium level between: Fairness: r = 0,444**, r² = 0,20** Accountability: r = 0,412**, r²= 0,21** **Clear Goals: r = 0,508, r² = 0,26**** Shared Norms: r = 471**, r²=0,22**

Fairness, especially accountability of the trustee and clear goals, especially acceptance of goals and sharing norms show high correlations. Innovation captures a special attention within the competence concept used in the research study. Based on the finding in the theoretical part, that bridging social capital is a necessary support for innovation, the accountability of the trustee and shared norms might promote innovation on one hand whereas factors like strong internal bonding ties show lower correlations.

P_B6: The higher the evaluation in trust specific situations, the higher the level of employee competence utilization	**Maybe, also supported by qualitative results** All situations are positive and significantly related to employee competence utilization on a level between r = 0,290** and 0,357** Situation A, 'allowance of constructive criticism & take it seriously': r = 0,327** Situation D, 'problem solving' r = 0,353** and Situation F, 'acceptance of decisions' r = 0,357**

The chosen trust vignettes are situations in which trust is manifested. Therefore all vignettes show high and significant correlations to trust (r = 0,518** - 0,864**). Further to this it was asked to analyze correlations between trust vignettes and employee competence utilization. As a result all correlations are positive, significant but on a low level. However the positive and significant correlation makes these vignettes valuable as a situation based implementation in practice.

P_B7: The higher the level in business excellence, the higher the level of trust	**Yes, r = 0,612** – 0,711*** The elements of continuous improvement, fairness and clear goals are positive, significantly related to trust on a level of: Continuous improvement: r = 0,711** Fairness: r = 0,648** Clear Goals: r = 0,612**

P_B8: The higher the level of business excellence, the higher the level of employee competence utilization	**Maybe, mutual basis with specific parts of the trust concept:** r = 0,263**– 0,313** The elements of continuous improvement and fairness are positive and significantly related to employee competence utilization on a level of: Continuous improvement: r = 0,313** Fairness: r = 0,263**

Based on the pilot interviews and literature the mutual basis between specific business excellence elements and trust was expected. Continuous improvement though leads to positive, significant and high correlations with trust (r = 0,612** – 0,711**). Significant correlations to employee competence utilization can be shown either, but on a much lower level. This result suggests that additional elements of the underlying trust concept are needed in order to achieve high levels of potential release.

Source: Author's figure based on empirical results

Having shown that the statistical results vary in a range of medium to low correlations, reconciliation with the acceptable range for this research study, defined previously, is reasonable. With the intention to further concentrate on the strongest correlating indicators which are applicable to give an answer to the respective proposition the following selection has been made.
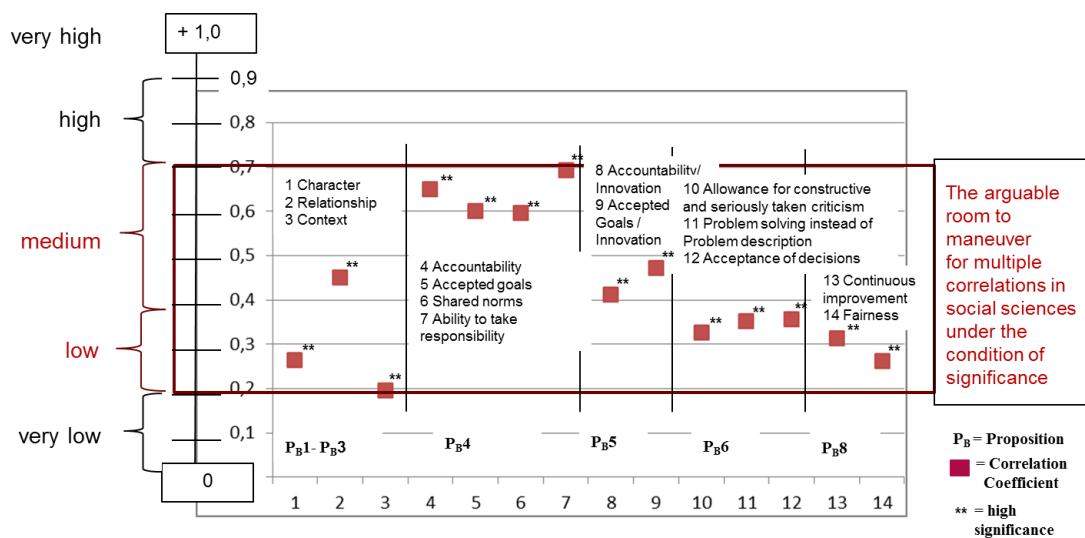
Figure 3. 6 Selection on correlations between trust and employee competence utilization related to the research study's propositions and based on the results of the employee study

Source: Author's selection based on the empirical results

Proposition $_B$1- Proposition $_B$3: It can be stated that indicators related to networks are strongly interrelated with the usage of employee competences. The correlation of relational characteristics and employee competence utilization is positive, significant and of medium strength. Theory supports that network structures are a basic element of social capital and in saying that relational trust is the most powerful form of trust. Correlations related to the trustee's characteristics and contextual elements are on a lower level, even though being positive and significant as well, which basically does not deny their additional impact on the concept. This is an aspect being further supported by the more detailed results being reflected in Proposition $_B$4: In the field of different indicators for trust and as shown in the figure above, particularly the accountability of the trustee as well as shared norms and accepted goals between trustor and trustee show the highest correlations with specific indicators in the employee competence utilization field. It further has to be emphasized that especially the ability to take responsibility correlates significantly at r = 0,692** with the trustor's intrinsic motivation. Thus it can be assumed that a situational context that allows freedom in decision making and action motivates employees intrinsically; the work content itself, as well as taking on responsibility is named here as essential elements of intrinsic motivation in this context. This is an aspect that underlines the importance of contextual elements within the model. Proposition $_B$5 takes a special view on the utilization of innovation competencies. The highest correlation level can be found between aspects of fairness, especially accountability (r = 0,412**) of the trustee and clear goals, especially shared norms (r = 0,471**); obviously a reliable character and a clear articulation and

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a common basis of norms and goals provides sufficient security to think and act innovative and at the same time still allows the orientation to partners outside the company triggered by bridging social capital.[361] Proposition $_B$6 touches on different trust vignettes: the trust situations were developed in the course of the pre-studies and were also evaluated within the management study and directed to the question whether or not the various situations correlate differently with employee competence utilization. Here the highest values can be found in situation D and situation F, which refers to 'problem solving instead of problem description' (r=0,353**) and the 'acceptance of decisions' (r=0,357**). But also situation A, which refers to 'seriously taken criticism' (r=0,327**) ranks high in terms of correlation. Proposition $_B$7- $_B$8 refer to the relation between business excellence elements, trust and employee competence utilization Correlations between business excellence and trust are on a much higher level (r = 0,612** – 0,711**) than correlations between business excellence and employee competence utilization ranking between r = 0,263**– 0,313**. Based on the theoretical and pilot study results a mutual basis between the concept of trust and the philosophy of business excellence was to be expected. Correlations between business excellence elements and trust underline this assumption based on the umbrella elements chosen for this research study. Although a positive and significant correlation of business excellence elements and employee competence utilization can be shown, it is on a much lower level. Results therefore suggest that additional elements of the underlying trust concept are needed in order to achieve higher levels of potential release. Continuous improvement though leads to strongest correlations with trust, being on a level of r = 0,313**.

3.3.2   INTERPRETATON OF RESULTS IN RELATION TO UNDERLYING THEORIES AND THE RESEARCH QUESTION

In general it can be stated that, based on the empirical results, the correlation between trust and employee competence utilization is supported. Based on purely statistical results, the empirical study has shown that the correlation of trust towards employee competence utilization can be assumed with r = 0,455** based on Spearman rho. (The respective results of the Pearson analysis even result in r = 0,584**.) Therefore the relation between trust and employee competencies is not contingent, based on a probability of 99 percent. Founded on a sample of 206 questionnaires the hypothesis *'the higher the level of (perceived) trust, the higher the level of employee competence utilization'* was not falsified. Based on these results it can be stated that a

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[361] Bolzern-Konrad, Egger & ŠUMILO (2015), for further details see this study, focusing on innovation capabilities, p. 98

high level of trust sustainably supports the willingness of the employee to work to his or her full potential resulting in better performance. This conclusion can be made within the context of the research study, referring to the underlying trust concept that was placed in the organizational field and a business excellence context. Consequently these results imply that, where trust is existent, new and unused possibilities arise and higher complexity is tolerated. In a sense trust can be seen as a catalyst for employee competence utilization. The following diagram has been developed in order to illustrate this idea.
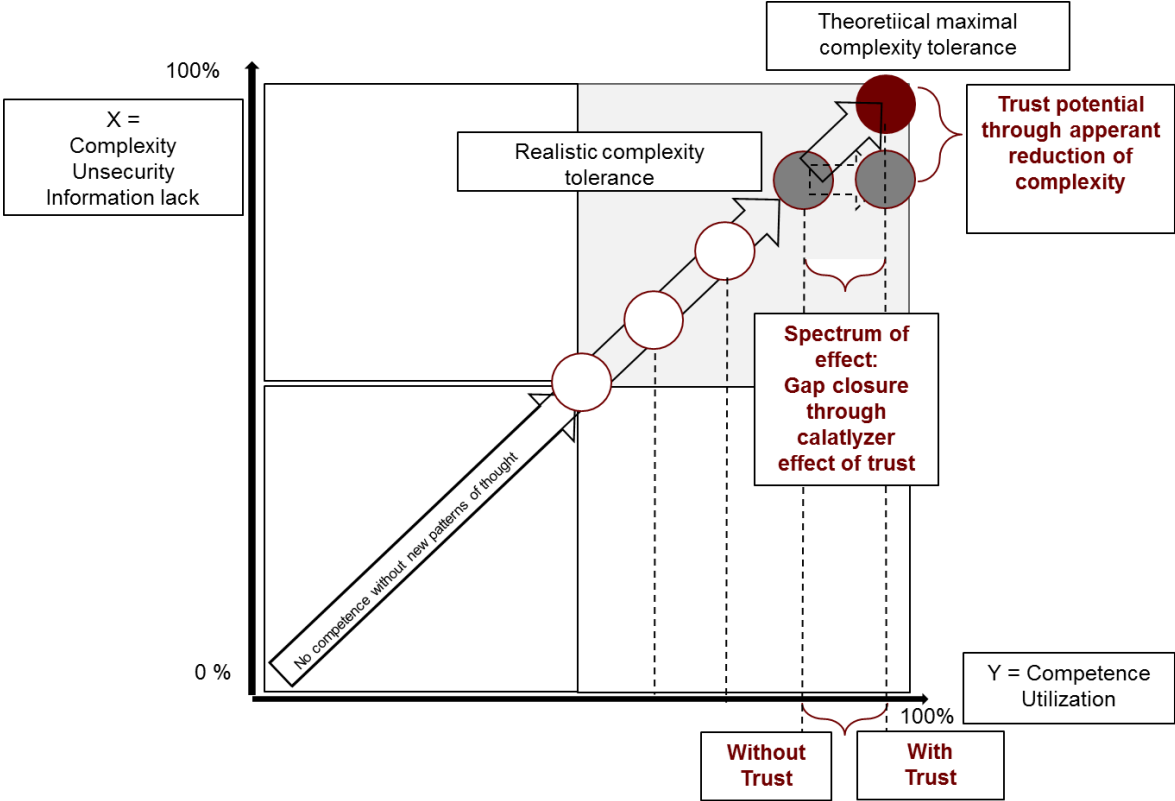
Figure 3. 7 The 'catalyzer-gap'

Source: Author's illustration

The diagram is intended to illuminate the maximal spectrum of trust effects on employee competence utilization (ECU). The underlying consideration is, that a 100 percent usage of competence fails because of our limited capacity to respond to maximum complexity. The interesting question thus is how we can manage to reduce this gap. Trust reduces perceived complexity, insecurity and unmanageable overload. Given an explanatory power of trust on employee competence utilization of 20 percent (r=0,455**, r²=0,20**), the catalyzer gap illustrates the possible volume potential that can be achieved through the impact of trust. This is the potential ⫿ for reduction of perceived complexity to a level that allows maximum employee

competence utilization. Being initialized by trust, the same can thus be seen as a 'catalyst' for potential realization. Even if a 100 percent trust level is regarded as a desirable goal with respect to the resulting potential realization, it may neither be assumed nor should be sought. Not only have theoretical results shown that trust is never the only impact factor, results also indicate that elements of control and distrust should always be involved in order to avoid blind trust. Further to this strategic management is embedded in internal and external factors, influenced by macro- and microenvironment that are expected to significantly impact the 'ability in use' as well. Here to name the competitive environment, basic technological developments, new substitution products in the field on the macro level, and even more employees' qualification level, process technology, the organization's structure and systems in place on the micro level, are expected to significantly impact the 'ability in use'. As a consequence a level of 20 percent being the outcome of the empirical study might not be unrealistic in terms of relative influence weight.

However this is a statistical explanation which had to be enriched by a substantive explanation testing theory. Based on the sociological background and the complexity of the trust concept a medium to low but positive and significant correlation was expected. Not only results are based on a particular concept of indicators characterizing the latent variable, also the research model implies complex causal structures of multiple latent variables which are simultaneously examined. As a consequence the results cannot just be seen as absolute numbers, subject to a 100 percent effective interpretation. On the contrary, they have to be analyzed using a relative approach, reflecting the particular character of trust and approaching the most accurate pattern of items significant for correlation and facilitating the most suitable concept of trust. Further to this results need to be enriched by a substantive explanation testing theory. With this intention various propositions were developed and further sub-questions had to be answered additionally. A summary of the empirical results is given as follows. In a more detailed specification of the main hypotheses different levels of the research model have been approached. Based on the question, *'Which aspects of the chosen trust concept have the strongest impact on employee competence utilization?'* the impact of personal, relational, and contextual elements was challenged. Firstly, all elements show positive significant correlations to employee competence utilization. With this the results basically underline the integrative approach with regard to character, relationship and action relation. Moreover in a relative evaluation of these elements, relationship aspects dominate. As a result, based on the general propensity of the trustor towards trust (r = 0,44**), the numbers show that relational aspects (r = 0,450**) clearly have greater impact on employee

competence utilization than characteristics of the trustee (r = 0,265**) and situational context factors such as delegation (r = 0,196**). Besides the aspect of predisposition and the evaluation of trustworthiness it is commonly agreed that 'relationship' is an important element of the trust concept. Within the research model relationship aspects include elements of network and transparence in goals, which are also essential within the social capital framework. Based on the fact that commitment, intrinsic motivation and growth perspectives show especially positive related outcomes of increasing levels of accountability, shared norms and the ability to take responsibility, predominantly reciprocal behavior is affected. As shown in the course of theory reciprocal behavior incorporates clear symbols concerning validity and compliance with rules and norms, the observable behavior as well as perceived care and equal treatment. The key role of relationship aspects within the trust concept is not only supported through the placement of the trust concept within the social capital context. The aspect of mutuality is also touched here, with trust being a resource created through the interaction of people. The theoretical analysis has also shown that highest quality levels of trust are reliant on relationships. The high importance of the relationship element was also underlined by Falk [362],Becke [363], Dietz and Hartog [364] having been previously integrated in the theoretical analysis. Based on the opinion that long term sustainable trust needs to be based on repeated interaction as well as on mutually internalized norms and the desire to fulfill them, the focus of the research study was also set on the behavioral aspect as well as on commonly shared institutional norms. Being supported by authors like Eberl[365], Schweer[366] Giddens[367] and Luhmann[368] the theoretical analysis also identifies levels other than just the personal characteristics of the trustee as being important. A supportive framework contributes to the willingness to cooperate. As a result the combination of personal and systemic trust features within the contextual elements. Therefore, although resulting in numbers on lower level, empirical results underline a significant impact of contextual elements, too. The focus is on whether circumstances and allowance for self-directed action are available. A similar argumentation has to be applied for personal characteristics. At a level of r = 0,511**, the strongest correlation can be shown for benevolence positioned under the aspect of trustee characteristics in the research model. Ability, predictability and integrity follow subsequently in

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[362] Falk (2002), p. 936,944
[363] Becke et al. (2013), p. 149,150
[364] Dietz & Hartog (2006), p. 563
[365] Eberl (2009), p. 24
[366] Jammal (2008), article of Martin Schweer, p. 16-18
[367] Giddens (1996), p. 197
[368] Luhmann (2014), p. 61ff

their impact on the overall trust level. As shown before and in line with the analysis of Dietz et al., integrity and benevolence are the qualities observed more frequently than competence and predictability.[369] Benevolence is interpreted as a basic condition to avoid opportunism which is seen a major threat towards trust in theory. Finally the integrative approach with regard to character, relationship and action relation underlines the integration of trust-based-action into the model, built on behavior results, as well as personal and situational aspects. Personal characteristics and situational context factors show low strength of correlation; nevertheless they are still in the range being defined to be acceptable previously in the research study especially as they show positive and significant correlations. Notably they are supported by theory, too.

Actually results show huge differences with regards to the various indicators of employee competence utilization. Whereas basically all trust indicators are involved in the correlation, on the employee competence utilization part the indicators, 'over obligatory performance' and 'satisfaction' are notably involved to a far greater degree in the correlation than the aspects of 'retention and productivity'. Given the confinement due to the chosen scale for the measurement of retention, it must be assumed that productivity and retention, though basically impacted by the level of trust, are simultaneously affected by a huge number of other impact factors besides trust. Whereas the correlations of trust elements with over obligatory performance and satisfaction are positive, significant and of a high medium strength, the correlations towards productivity and retention are lower. Whilst correlations with productivity are still positive and significant, retention alone does not show a significant correlation, and even shows a negative impact of trust indicators on employee competence utilization indicators. However it has to be assumed that these results were influenced by an inappropriate scale. Accordingly it may be assumed that the actual values as well as the correlation would have been higher if the scale had been chosen differently; an assumption also supported by other studies.[370] Thus engagement, commitment, and satisfactory effects seem to be more directly impacted by a culture of trust. These results might also be imputed to the fact, that the employees taking part in the research study didn't have the same amount of information on productivity numbers as management had, and were not addressed with the same specific questions regarding productivity. (Correlations based on management survey results did show high and significant correlations between fairness, network

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[369] Dietz & Hartog (2006), p. 568, Further to this Dietz et al challenged the conceptualization of competence (the phrase of competence is used synonymously with ability in their study) within the concept of trustworthiness, marginalization on the one hand prominence on the other.

[370] Ooi et al. (2006), p. 532, 536 In their study Ooi et al. found the strongest positive correlations between organizational trust and the intention of remaining in the company.

and delegation to productivity). Consequently they did have more specific knowledge of their own efforts than of productivity numbers. Furthermore employees might have evaluated their own strong efforts higher, than management and questions regarding willingness might be more sensitively received than productivity. Nevertheless these results might lead to the assumption that the different indicators of employee competence utilization chosen for the research model might need to be conceptualized as a stepwise process.[371]
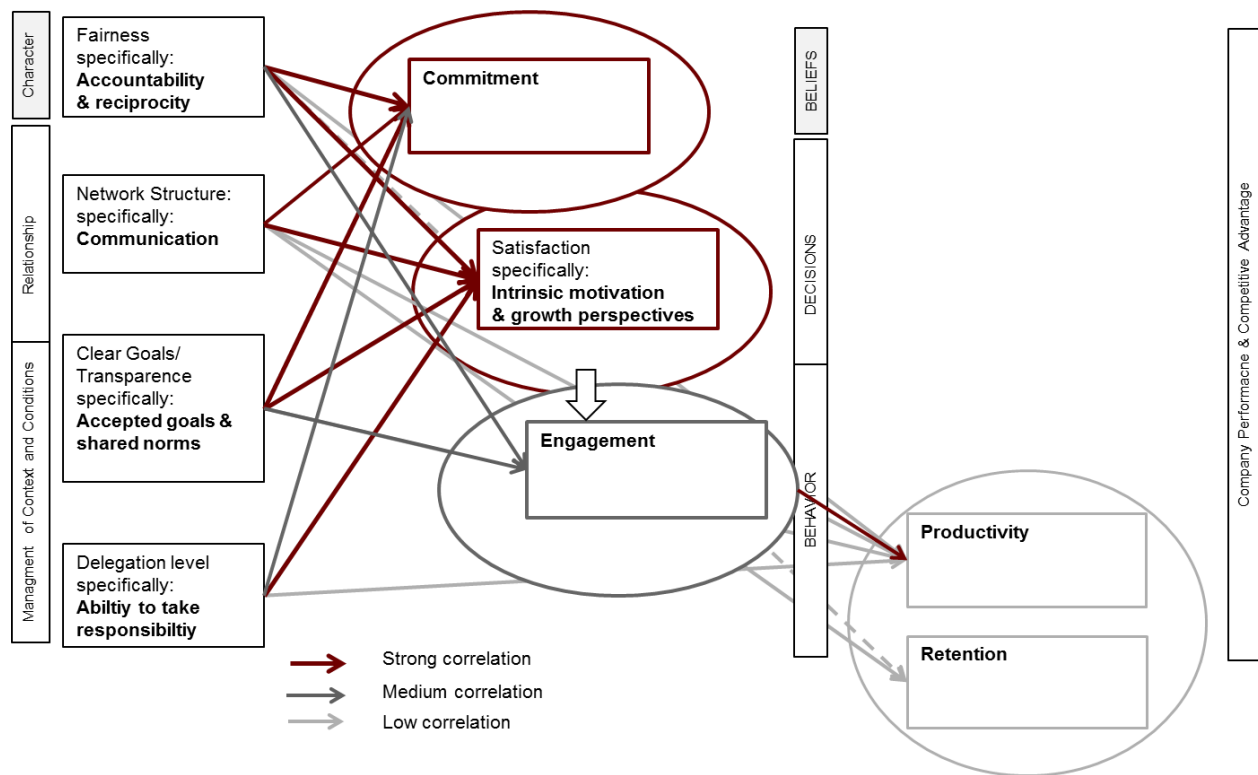
Figure 3. 8 A stepwise approach to the research model

Source: Author's figure

As retention and productivity are much lower as far as correlation is concerned: they might be either exposed to a higher number of different input factors or have to be seen as a subsequent step following commitment, satisfaction and engagement. Literature has similarly shown that commitment and motivation are closely related[372] and that intrinsic motivation is a relevant element supporting the willingness to perform.[373] In their study on job satisfaction Ferreira et al.

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[371] Bolzern-Konrad, Neuert & Woschank (2015)

[372] Morrow (1983), p. 491, here he refers to Mowday et al., (1979), Commitment and motivation are thus very close, especially as motivation is a factor of affective commitment seen to be responsible for high retention of employees. Also shared norms and accepted goals have high impact on commitment.

[373] Hersey & Blanchard (1974), p. 28, 29, Based on the assumption that the level of ability is high, the target is to achieve a correspondingly high level of willingness too, resulting in high maturity. At this point Hersey and Blanchard suggest that management should begin to reduce task behavior and increase relationship behavior to the

state that the relation of the employee's engagement with job satisfaction is relevant and that job satisfaction itself is relevant to company performance; [374] an aspect that would support a stepwise approach.

Before moving onto specific elements and situations conceptualized and analyzed within the research model, one result that should be emphasized is that besides the importance of all personal, relational and contextual elements in a combined approach, the impact of fairness on satisfaction and of accountability on intrinsic motivation was the highest ranking correlation. As a result it cannot be denied that, whatever the necessary framework of a trust concept is, it does not function without a clear commitment of management towards fairness and accountability. At the same time this is also seen to be a requirement of managerial attitude to employees as well as of their own character.

Touching on the particular aspect of innovation, results allow the interpretation that, trust positively impacts innovation. As mentioned before, innovation attracts special attention within the competence concept used in the research study. As part of the creative dimension and touching the knowledge content of competencies, innovation is supported by high levels of trust as it reduces insecurity and risk. On the other hand, innovation needs specific forms of institutionalized distrust to function. This is to avoid lock-in effects and the development of blind and non-reflective trust. Emotions support courage to take action but in turn can also hinder creativity. Hence emotional commitment towards problem solving is critical for organizational competencies, but excessive demand of these may inhibit intrinsic motivation. As has also already been shown, bridging social capital is especially necessary in order to promote innovation. This aspect might explain why factors referring to personal characteristics such as the accountability of the trustee promote innovation whereas factors like strong network ties, especially internal bonding ties show lower correlations. The highest values of correlation to innovation can be found in the element of shared norms; which is influenced by both the character of the trustee and directed by the relationship between trustor and the trustee. Obviously a clear articulation and a common basis of norms and goals does give sufficient security to think and act innovatively and at the same time still allows orientation to partners outside the company triggered by bridging social capital. This corresponds to the findings of the research's study theory, that bridging social capital is reliant on a degree of independence from internal networks

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point where the individual or group is sufficiently mature. Subsequently management can decrease his socio-emotional support accordingly.
[374] Ferreira & Real de Oliveira, Elizabeth (2014), p. 337

in order to allow and enable contact to external partners. Therefore trust requires embedded bridging social capital and institutionalized distrust. At this point the general importance of multiple angles in thinking and learning becomes obvious to prevent lock-in-effects and the development of blind trust. As has been in theory an institutionalized balance of trust and distrust may prevent a diffuse feeling of 'mutual reliance' without reflection. Therefore distrust may have enriching aspects with regard to a balanced trust culture, allowing awareness and ability for innovation. These aspects were also supported by Eberl[375], Baumane/Sumilo [376], Becke[377], and Luhman[378]). Based on this background and the exposure of companies to ongoing changes a continuous balancing act between trust and distrust elements is required. Therefore the establishment of trust might even be seen as a continuous enhancement circle process as shown in the diagram below.
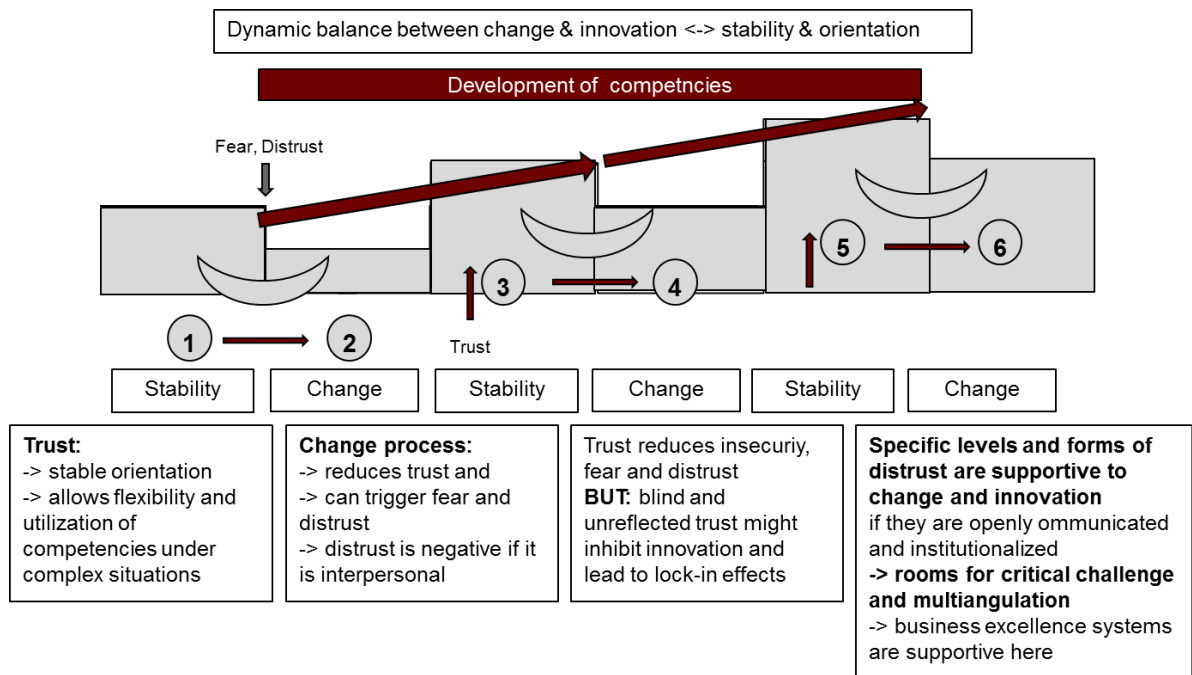
Figure 3. 9 Trust-employee competence utilization – a dynamic circle process

Source: Author's Figure

As shown in the diagram the dynamic balance between change and innovation on the one hand and stability and orientation on the other hand may lead to a continuous enhancement process where trust exists. However this process requires institutionalized distrust and room for challenge. Being supported by the frameworks of a business excellence systems   continuous

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[375] Eberl (2009), p. 98
[376] Baumane, I., Sumilo, E. (2007), p. 73, here they refer to Granovetter, 1973 and Burt 1992
[377] Becke et al. (2013). p. 97, article of Hörling and Ellrich
[378] Luhmann (2014), p. 93, 99, p. 116, p. 121, p. 124, here Luhmann refers also to A.W. Gouldner 1954 b

improvement concepts and institutionalized open failure handling are seen to be frameworks that build the basis of business excellence systems that comply to this idea; a result that was also confirmed in the course of the empirical study. Essential 'institutionalized challenge' and 'multiangulation' are considered to be 'trust supports' providing neutral scope for development of challenging aspects such as distrust and continuous improvement. These are essential and enriching aspects of the trust concept and especially of pure innovation capability.[379] This result provides the answer to the sub-question, *'Can business excellence be seen as a system that positively impacts the creation of mutual trust?'* that it can indeed be seen as supportive. With the results of this work concentrating on the unity of personal and organizational elements of trust the concept of business excellence should be seen as a valuable promoter of the correlation of trust and employee competence utilization. It also supports the respective manager in his personal and situational development. Above all it is thinkable that not only leadership maturity is supported by the implemented business excellence system but also the personal predisposition to trust of employees might be intensified based on the implemented system. As a result, business excellence, developed as an umbrella concept for all systems incorporating the key issue of strategic thinking, is effective in general organizational propensity to trust and with this also effects personal perceptions.

The notion of strategic management leads over to the evaluation of special 'trust-vignettes' which are decisive in contextual elements. As a result, especially 'problem solving rather than problem description', the 'acceptance of decisions', and also 'seriously taken criticism' rank highly where correlation of these situations to employee competence utilization occurs. It has been shown in the theoretical section that the 'solution of problems' is an essential part of the competence definition itself. Questions behind these special situations refer to the allowance of self-directed continuous improvement, fairness and accountability of the contact person and to reciprocity failure handling. Aspects such as the consistency of words, the traceability of decisions and the possible interpretation of decision motivation are touched on. It is also questioned whether people in the organization really do what they have promised. All situations reflect on trust being experienced through behavior. To summarize, these findings are of importance as they reflect situational attributes. They are the result of a mixed methods application, exploratively developed throughout the pre-studies. As has been shown in theory, continuous improvement concepts and institutionalized and open failure handling are frameworks

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[379] Bolzern-Konrad, Egger & ŠUMILO (2015), for further details see this study on innovation capabilities, p.98

that constitute the philosophy of business excellence systems. Thus results very much reinforce its mutual basis with the trust concept.

Based on these interpretations the final sub-question can be asked, *'Shall the mission of strategic business management be the creation of mutual trust?'* The answer is 'yes, but'; also if the general idea of the research study was supported by the empirical results, the pure view of the statistical numbers would not be sufficient to explain the complexity and particularity of the concept. As shown in the theoretical section, trust and employee competence utilization *are intangible resources that* elude a purely strategic approach and have to be balanced with the special needs of a fragile human resource. Therefore this perspective should not be understood in terms of opportunism and exploitation, but in terms of orientation on the company's success. The stages passed through in theory touch on how frameworks required from strategic management for the special character of this fragile resource are balanced. These are needed to complete the picture of trust. The stages are shown in the diagram below.
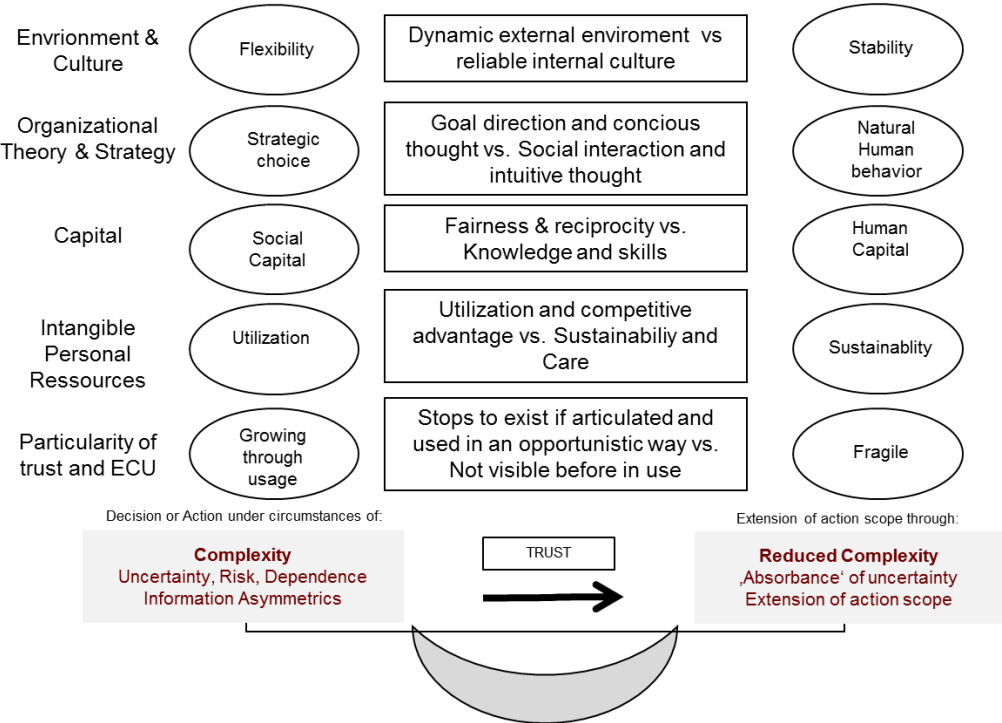
Figure 3. 10 Balancing frameworks for strategic management - the view of a particular resource

Source: Author's figure

The theoretical analysis has shown that organizations underlie the area of conflict between stability and flexibility. Being exposed to ongoing changes in the business environment companies need to be adaptable as well as simultaneously taking care of stability as a basis for

performance. In order to cope with this challenge trust plays an important role. On one hand the processes of change require trust, but on the other hand may reduce intra-organizational trust. Theory broached an issue that under these circumstances bridging social capital and distrust, being institutionally anchored, may provide room to accommodate challenge and be innovative. Arising from this is the strategic need for an appropriate concept towards trust. Management is seen to take the leading role in choice making regarding its positioning within the wider environment. Nevertheless organizations are neither purely rational nor purely socially constructed. Being strongly reliant on human capital strategic management needs to constitute a performance network through the establishment of social capital. Organizations also need to address the utilization and sustainability of their respective resources in order to achieve a competitive advantage. As has been mentioned trust and competencies actually grow through usage and interaction and share the characteristic that they are both only evident once in use, a transformation which is strongly related to strategic management. Both resources are also difficult to imitate due to their complexity. Both are unique especially in their organizational interaction and interrelation and therefore cannot easily be substituted. These aspects are also supported by other authors like Schoorman[380], Becke[381], Ehnert[382] and Blienser.[383] As a consequence strategy is important in order to consolidate the resource trust with the resource of competence, but strategic management should not purposely produce trust. The position taken for the research study is that trust is indirectly supported by strategic management in establishing frameworks but is not just a question of strategic decision and action. Once implemented the creation of trust is expected to promote the use of potential which in turn increases the trust level.

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[380] Schoorman, Mayer & Davis (2007), p. 346 here he refers to Cyert & March, 1963 and Simon, 1957, Schormann shows the relevance of this perspective, in seeing trust of either a dominant coalition or the management team to be critical in understanding organizational trust, since it is at this level that trust that governs the strategic action of the organization.

[381] Becke , p. 84, here he refers to Ehnert, 2009 , see also Ethics of trust - Lyon, Möllering (2012) p. 11 Writing a paragraph in the book of Ina Ehnert, which refers to Sustainable Human Resource Management, Guido Becke also attaches importance to this aspect. He explains that attracting, developing, regenerating and retaining these critical and indispensable human resources is a core challenge to human resource management. But in a broad sense this approach can be defined as, 'the management of work and people towards desired ends'. However in order to gain organizational sustainability, sustainable human resource management has to balance the efficient development of human resources with their long term availability.

[382] Ehnert (©2009), comment from the author: As the examination of both trust and competencies shows later in the research work, trust is very much bonded to the aspect of benevolence as well as the usage of competencies is directly entangled with the aspect of meaningfulness. Furthermore both resources incorporate the feeling of playing an important role in the company's success. In so far as the construct under research itself is concerned the term 'usage' should be understood as 'valuable' and as 'exhausted'.

[383] Bliesner et al. (2010), p. 25, 26, here they refer to the basic model of organizational culture being based on core values and practices – (Hofstede and Schein), Different strategic management may develop frameworks and set an example promoting elements of trust.

These considerations made, the main research question *'Does trust perceived by an employee towards the management lead to higher utilization of the own competences?'* can be positively confirmed.

In general the findings are based on a mixed methods approach including quantitative and qualitative elements in order to achieve a complementary understanding of social sciences and appreciate of the values of different approaches. This approach is taken albeit focusing on a quantitative survey in the main empirical part allowing comparability of results. The high standardization and possible statistical analysis allow the review of data gathered. For the main empirical study a sample of 206 employees was addressed. Although a small number in correlation to the whole targeted population the sample still allows a differentiated statistical analysis of data. The reliability of data can be assumed for the research results of the study. To confirm the reliability of the results a repeat study should be made producing the same results.[384] Given that the companies were selected based on well-defined qualitative aspects, as well as on well-known parameters with respect to the whole population, it is arguable that the number of cases necessary can be reduced significantly compared to a pure random sample. Basically all individual samples within the specified community have the same probability to be chosen.[385] The generalizability[386] of the study at hand should be limited to the medium sized manufacturing industry in Germany which is positioned in the business excellence environment. Indeed within this chosen segment, company results were comparable and therefore contribute to the estimation of generalizability within this field. The defined level of business excellence should be seen as argumentation for a positive generalization of results for all companies within the chosen boundaries. A generalization specifically applicable to small and medium-sized manufacturing companies on a comparable business excellence level can be assumed. As to the aspect of data integrity the validity[387] of the respective data concerned has been confirmed. The preferable instrument of data collection was a written online self-completion questionnaire with all questions being of a closed nature so that high validity is expected. This assumption is supported

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[384] Collis & Hussey (2009), p. 64, here he refers to Bonoma, 1985 *'Researchers desire high levels of data integrity and results currency. Data integrity describes characteristics of research that affect error and bias in the results, whilst results currency refers to the generalizability of results. In any research project, there is likely to be a trade of between data integrity and results currency. Reliability is concerned with the findings of the research and is one aspect of the credibility of the findings'.*
[385] Collis & Hussey (2009), p. 212
[386] Collis & Hussey (2009), p. 65 *'Generalization is concerned with the application of research results to cases or situations beyond those examined in the study; so generalization means the application from the sample to the population defined in the scope of the research work.*
[387] Collis & Hussey (2009), p. 64 *'Validity is the extent to which the research findings accurately reflect the phenomena under study.'*

as all questions had the same structure and were answered based on interval scales implemented in form of end-point based verbalization combined with a specific scale number ranging from 1 to 5. All scales have been realized with 5 scale points accepting the risk that the middle category allows an escape decision but, on the other hand, reducing the risk of item-non responsiveness. As a result the response to the answers was high. The scale direction was also clearly shown. This given, the fulfillment of requirements for elaborate statistical methods should be assumed. Direct reference to both variable trust and employee competence utilization was avoided in nearly all questions. [388] Further to this each single question was developed with respect to a single indicator. In addition the design of both semi-structured management interviews and quantitative employee questionnaires were harmonized in order to ensure a comparison between the answers of managers with the respective employees of each company.

3.3.3   INTEGRATING RESULTS OF MANAGEMENT, EMPLOYEE AND BUSINESS EXCELLENCE EXPERT

As shown before the different steps of the empirical study were executed separate from each other. As a consequence it is of interest to analyses the data in an integrating and deliberating approach in order to give answers to the following questions.

Do the results of the management study comply with the results of the employee survey? Results from the management study were also predominantly directed at supporting the selection process and function as a 'door opener' for the main empirical study. But the combined quantitative and qualitative results of the management study give additional insight into the pure quantitative study directed at employees and with this contributed to the mixed method approach. Results are also of further value as they reflect differences in the standpoint of management compared to their respective employees. However, the employee survey was based on 206 questionnaires whereas the management study was based on just 11 management interviews. The sample size of the management study was therefore too small to execute a correlation analysis per company. Nevertheless and in order to compare the results between management and employees in general the mean values of trust and employee competence utilization were analyzed and provide the following picture.

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[388] Diekmann et al. (2010), p. 47, here he suggests no direct addressing of the term
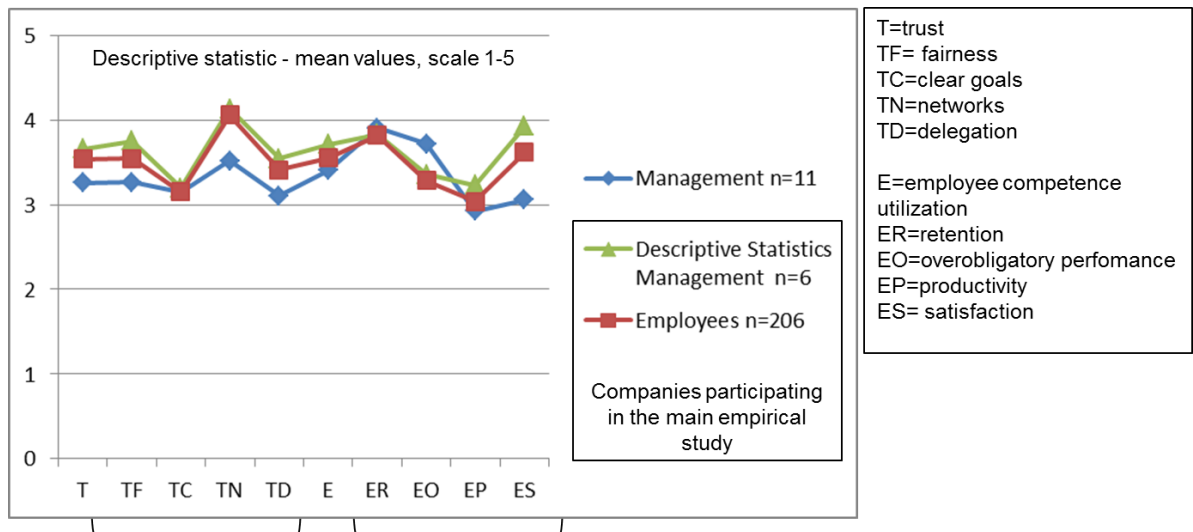
Figure 3. 11 Level of trust and employee competence utilization: a comparison of management and employee perceptions

Source: Author's figure based on empirical results

The mean values for trust and employee competence utilization and their respective indicators show pretty much the same level for management of the six selected companies as their respective employees. The values of the community of all 11 companies initially involved in the management survey are also in line with the overall evaluation. Consequently, and based on mean values, the results of managers and employees support each other and thus contribute to the results shown previously.

What does the correlation between trust and employee competence utilization in a comparison of all participating management and employees look like? Do management results lead to a significantly different correlation than that of the employees'? The following diagram is intended to give an answer.

Management Interview

R = 0,827**

Trust — ECU

Employee Questionnaire

R = 0,455**

Trust — ECU
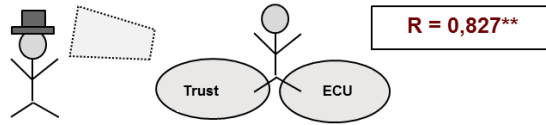
Correlation Management n=11, r²

	Retention	Overobligatory Performance	Prodictivity	Satisfaction
Fairness	0,001	,057	0,377*	0,043
Clear Goals	0,004	0,257	0,173	0,165
Network Structure	0,289	0,185	0,604**	0,389*
Delegation level	0,152	0,280	0,610**	0,423*

Productivity — Satisfaction
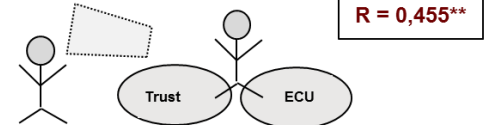
Correlation Employees n=206

	Retetnion	Overobligatory Performance	Productivity	Satisfaction
Fairness	0,01	0,38**	0,03*	0,58**
Clear Goals	0,00	0,41**	0,03*	0,47**
Network Structure	0,01	0,19**	0,06**	0,29**
Delegation level	0,00	0,33**	0,11**	0,46**

Overobligatory Performance — Satisfaction

Based on Spearman Rho
**.The correlation is significant on a level of 0,01 (2-sided)
*.The correlation is significant on a level of 0,05 (2-sided)

Figure 3. 12 Correlation strength of trust and employee competence utilization – a comparison of management and employees

Source: Author's figure based on empirical Results

Management answers suggest that the correlation between trust and employee competence utilization is r = 0,827**. This number is much higher than the result of the employee study showing r = 0,455**. Despite these differences the results of management and employees both show a highly significant correlation. The differences in results can be explained firstly by the fact that management had significantly more information on the topic than employees, which might have had an impact on their answers. Secondly, management had to answer distinctly more questions related to productivity than employees: the assumption being that a certain numbers were only available to management. The correlation between trust and productivity could therefore be shown as being more significant for management than for employees. Furthermore the level of productivity was seen to be notably more sensitive to other independent variables besides trust such as over obligatory performance and satisfaction are. Thirdly, it can be assumed that management simply has a different view on the issue since managers were not asked about their own trust level, but rather their evaluation of their employees'. In addition, and with respect to the research study, management might tend to a more positive evaluation confusing the goals they want to achieve with the achievements themselves. This suggestion is in line with other empirical studies, which state that management does generally evaluate the condition of trust cultures in organizations as unproblematic whereas other company players doubt that

evaluation. [389] These arguments may explain of the differences. Beyond this, results of management and employees show significant general positive correlation.

How are the results with regard to the specific indicators? Within the management study highest explanatory power is found between fairness, network and delegation towards productivity. As shown before this effect can be explained by the larger availability of numbers for measuring productivity effects compared to the information the employees had access to. The most distinctive differences are also to be seen with regard to the correlation of trust and over obligatory performance. Whereas management results show high correlation of trust indicators towards productivity, employee results show a similar effect with regards to over obligatory performance. Productivity and over obligatory performance are very close. High production levels implicate greater efforts. Nevertheless the research model refers to commitment and engagement as indicators of over obligatory performance and with this the emphasis is made on the aspect of willingness. Beside the fact that management was questioned more closely on productivity, employees may rate their own efforts more highly than management. Results of the employee study thus suggest that the aspect of willingness is more sensitive towards a given trust level than productivity is. For further underlying data of the management study see Appendix 7. Most obvious parallels in both studies are to be seen in the correlation of delegation and network factors with satisfaction. Especially delegation as part of the trust concept correlates significantly and strongly with satisfaction. Management results even came up with much higher levels between networks and satisfaction than employees did. In contrast, the correlation between fairness and satisfaction of r = 0,762** shown in the employee study could not be found throughout the management study; here external and internal assessment might diverge.

Do the results of the pilot study comply to the main empirical study? The pre-studies were intended to evaluate the overall relevance of the topic and to support criteria for the qualitative selection process of the involved companies. Further to this specific trust situations have been evaluated throughout the studies. These situations have been defined as 'trust-vignettes' and were integrated into the subsequent management and employee study. This decision was made in order to allow a contextual perspective on the concept of trust. The 'trust-vignettes' were analyzed in

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[389] Becke et al. (2013), article of Funken and Ellrich, p. 20 as well as Klinke, p. 55,61 16 case studies with small and medium sized companies in manufacturing industry 2010 and 2011 in Germany: 96 percent of all managers state in a quantitative survey that trust culture is unproblematic and believe that their employees have a high or very high trust level. 90 percent are furthermore of the opinion that employees are always kept informed comprehensively and up to date.

their effect on employee competence utilization in the course of the analysis. A combined view of the results is given as follows.

Explorative Results of Pilot Study		Ranking of Business Excellence Experts

Explorative Results of Pilot Study

A **Allowance of constructive criticism & take it seriously**
B Dealing with failures
C **Freedom in decision situations**
D Problem solving instead of Problem description
E **Work efficiency in the absence of leaders**
F Acceptance of decisions

Ranking of Business Excellence Experts

Most important:
- Allowance of contructive critisism & take it seriously
- Dealing with failures
- Freedom in decision situations

Followed by:
- Problem solving instead of problem description
- Work efficiency in the absense of leaders
- Acceptance of decisions

Results of Employee Questionnaire

Most important:
- All situations show levels higher than 3 as regards to the mean value with no exception.
- Further to this Situation A, D and Situation E show the highest values. These situations refer to the allowance of fair criticism, problem solving instead of problem description and acceptance of decisions

Correlation Employee n=206 - Situations	Spearmann Rho
	E / r
Situation_A	0,327**
Situation_B	0,294**
Situation_C	0,294**
Situation_D	0,353**
Situation_E	0,290**
Situation_F	0,357**
**. The correlation is significant on a level of 0,01 (2-sided)	
**. The correlation is significant on a level of 0,05 (2-sided)	

Figure 3. 13 Trust-vignettes in comparison between management, business excellence experts and employees

Source: Author's figure based on empirical Results

Results of the management and employee survey correspond to the assumptions made in the pilot-studies. The mean value of all trust-situations is ranked highly, giving an idea of their general relevance. Further to this the allowance of fair criticism ranks on the highest level when it comes to the mean value; an aspect that also correlates highly to employee competence utilization. This is especially of importance as the allowance of fair criticism is a central issue within business excellence systems. Consequently the comparison of results underlines the supporting aspects of business excellence towards the trust concept. These results give a deductive explanation of the inductive assumption made at the early beginning of the study. Being chosen upfront, the 'trust-vignettes' are thus seen to be an adequate means of describing key trust environments.

Is the perception of different values similar or different? Both management and employees were asked about their perception of different values characterizing their respective companies. Business excellence managers were also exposed to this topic, having been asked to choose values that they associated with business excellence. Results are shown as follows.

Figure 3. 14 Values 'perception of management, business excellence experts and employees

Source: Author's figure based on empirical results

As a result management selects trust and team spirit most frequently. Employees focus on quality and willingness to perform; followed further down the list by trust.[390] Business excellence experts select the value of responsibility most frequently, followed by the willingness to learn; trust is also mentioned very often directly after quality. Overall the value of trust, quality and team spirit rank highest. This result complies with the assumption that the issue of trust is especially valid in companies having applied business excellence systems. It is also not surprising that quality and team spirit are chosen frequently as these are essential elements of business excellence systems.

Finally are there major differences among the different cases? No there aren't any major differences. The respective results are shown in the following diagram.

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[390] Bolzern-Konrad & Egger (2014), for further details see this paper, p. 328

| C1 'Center of excellence' -> r = 0,508** | C2 'Satisfied customers' -> r = 0,634** | C5 'Growth and product innovation' -> r = 0,492** |

| C6 'Growth and professionalism' -> r = 0,499 | C9 'Innovation and diversification' -> r = 0,505 | C12 'Internationalization and attentiveness' -> r = 0,495 |
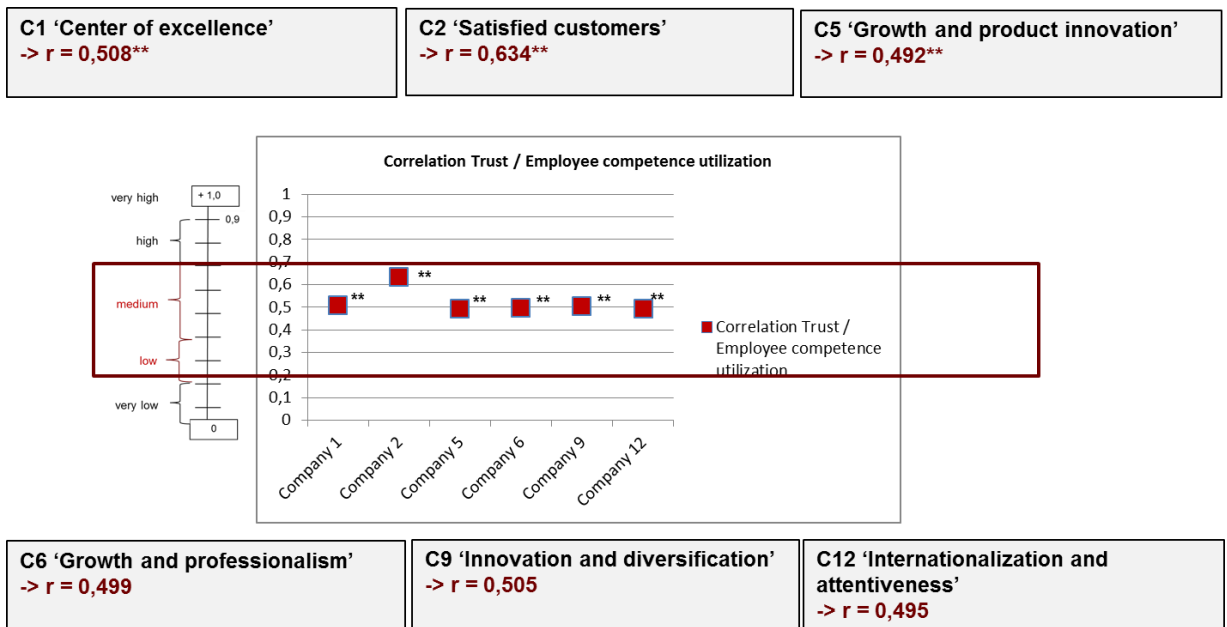
Figure 3. 15 Comparison of correlation between trust and employee competence utilization per company

Source: Author's figure based on empirical results

All companies show significant values of the coefficient 'correlation between trust and employee competence utilization'. The range is positioned within a correlation of r = 0,49 to r = 0,63. In line with the main employee study comprising all 206 employees the underlying detailed analysis of the particular correlation within single companies also shows strongest correlation between all indicators of trust with over obligatory performance and satisfaction. Although there are slight differences between the individual companies the general direction of correlation and the comparative level of the different indicators can be confirmed for all companies. For further details see Appendix 8.

3.4   TRACEABILITY AND PLAUSIBILTIY OF FINDINGS CHALLENGED BY EXPERTS IN THE FIELD

In addition to the author's reflection on the results in comparison to existing literature, the results were challenged with experts in the field.[391] Related to the topic and research questions experts were selected from the fields of trust, competencies and business excellence. The interviews were purely qualitative and based on completely open questions and discussions. Basically the stream of knowledge, the research problem and major findings were presented

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[391] Gläser & Laudel (2008),p. 12, The term expert describes the specific role of the interview partner as a source of special knowledge of social issues to be investigated. Expert interviews are an appropriate method of developing this knowledge.

upfront during the interviews. Based on this information discussion and comments were made about the general traceability of the approach as well as about the plausibility of the respective empirical findings. Comments were evaluated towards their possible support or denial of results and interpretation or further aspects involved. The list of interview partners and the complete table comprising the comments is shown in Appendix 9.

Summarizing supportive comments, the opportunity of measuring trust was seen to be very important (5). Although measurement in general has the annotation of control it is a precondition for the common understanding of goals (5). Management needs ideas of how to build trust since trust is not only formed indirectly but also needs to be actively promoted (5). In general the need for an integrative trust model was supported (1). Also major indicators with regard to employee competence utilization (2) (3) and trust (5) were confirmed. 'Motivation' as a foundation of the element of 'willingness' within the competence concept, was underlined (4). Referring to the general character of asymmetric relationships it was emphasized that the initial move has to be made by the trustee, resulting from a general positive attitude (2). It was further underlined that room for professionalism need to be part of the competence concept (2). Finally, the importance of relationship elements (2) and teamwork (5) was confirmed. The latter also illuminating the aspect of continuous improvement processes as a useful tool (6). Integrating interpersonal and organizational elements into the model establishes a good combination of emotional aspects and objectives (5).

Summarizing additional comments further to the aspects already considered: more practical aspects. First the issue was broached to issue that the participation of companies within the empirical study itself may be seen as a signal of a certain level of trust within the company (2). In general it was pointed out that a culture of trust does not mean that all decisions are based on the opinion of the entire community; critical reflection still should be still allowed (5). The phrase: 'trust is not a harmony concept'[392], is an idea also taken into account. Malik similarly points out that integrity, consistency and predictability are of much higher importance than collegiality, anti-dictatorial leadership and the attempt to do everything right. Authenticity is more important than just being open with everybody. Mistakes or changes in decision are allowed as long as they are explained and verifiable. Predictability and reliably are of utmost importance. The target should not be to report everything you know but that what you say should lead to consequent and

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[392] Endress (2008), p. 3 he also refers to Heisig/Littek,2003, trust is not just a harmony concept, but from sociological perspective structural ambivalent

reliable behavior.[393] With regard to the competence concept it was underlined that this in itself can also be a symbol for trust, if non-willing is allowed in special cases (4). The aspect of excessive motivation and burnout was also touched on. It was pointed out that the leader of the organization has to set a good example in this respect (4). Nevertheless in the sense of this research study attitude on human beings, as well as the integration of benevolence in the concept of trust should avoid this effect. Further to this engagement, satisfaction and intrinsic motivation should be active in order to balance needs. [394] Finally the aspect of self-confidence and self-esteem was touched on (3). It was stated that trust promotes self-efficacy, self-confidence and self-esteem. It should be taken into account that self-efficacy derives from previous experiences as well as present employee-leader relationships. With the research study in mind it is assumed that, when employees believe that their goals are achievable through their own efforts they are intrinsically motivated to act. 'If we believe that a task is attainable through our own effort, we will go for it'. [395] Luhmann also comments on self-efficacy. He states, that humans and social systems are more likely to be willing to trust if self-efficacy (self-confidence) is inherent. It enables them to face a possible betrayal of trust with countenance. But the question is, whether self-efficacy is the basis for trust or whether self-efficacy can only be learnt in situations where trust has been proven.[396] In conclusion it was suggested and put into practice that one of the selected companies involved in the empirical study should be included in the challenging expert interview.

Finally limitations and shortfalls of the results as well as suggestions for further research have been discussed. With regards to the exclusion of personal characteristics from the research study the following comments have been made: The trust level may differ from relationship to relationship (1). Furthermore there is no single universal concept applied to increase the perceived trust level as the character of employees varies widely. There are employees that feel good and develop in high trust cultures whereas others need mistrust elements, in which impulse arise from scrutinizing and challenging work systems (5). Considering restrictions that have been taken into account throughout the interpretation of results and their conclusions, the following comments has been made: In the field of strategy trust must not be used in a calculative manner.

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[393] Malik (2006), p. 147-149
[394] Ferreira & Real de Oliveira, Elizabeth (2014), p. 337, here they refer to Malslach, Schaufell and Leiter 2001); employee's engagement is relevant for job satisfaction and job satisfaction itself is relevant toward company's performance. As explained by Ferreira et al. engagement even is considered as an antipode of burnout.
[395] Werth & Mayer (2007), p. 168
[396] Luhmann (2014), p. 102 with reference to B.R.C. Kwant 1965, S.96

The condition for trust is authenticity. Trust should not be used purely strategically (3). Trust should not be seen as the sole promoter of employee competence utilization (3). Strong networks are highly bonding and may inhibit individual responsibility and flexibility as well as excluding newcomers due to the effects of clique building (5). Continuous improvement concepts also have their downsides if they are used too systematically. The danger is that they simply degenerate into a superficial cover which might even inhibit innovation (5). When a business excellence system is not linked to trust it only performs on a short term basis. If the philosophy is not mutually balanced with real trust it tends to be based on calculative trust levels and may as a result be perceived negatively (6). The willingness to learn as well as trust is an aspect that is incorporated in the concept of continuous improvement. It is of major importance that continuous improvement processes are not only used to solve specific problems. Furthermore they should be based on a free motivational basis supported by systemic installed room to manoeuvre (6). Management and employees do have different views. Whereas management is more interested in productivity figures, employees care much more about engagement, commitment and satisfaction (7). Trust is strongly linked to leadership and personality. A culture of trust missing the element of reliability only works short term. A culture purely based on one dominating leader is predominantly based on his or her competence (5). At this point the combination of interpersonal and organizational trust integrated in the research model becomes important. Most often jobs are quit because of deterioration in the working relationship with the respective leader (1). At this point business excellence might function as a promoter of mature leadership. This aspect is reinforced by another factor: The possible promotional effect of a business excellence system with regards to sensitization of junior leaders (3). A downside of having clear goals provided by management may be that employees are less motivated to provide their own goals. Consequently the supply of clear goals and a level of delegation have to be balanced. Business excellence might function as a good promoter which increases teamwork on the basis of responsibility (7). Would a culture of scarcity and fear also lead to performance (7)? As results have shown essential elements of the trust concept such as benevolence and integrity but also reciprocity are not evident in a culture of scarce and fear. Nevertheless it can be imagined that scarcity and fear induce productivity on a short term basis whereas long term sustainable 'over-obligatory' performance can only be expected where real trust exists. There is no guarantee of the ethical basis of company targets. It can only be assumed that if a manager is generally positively oriented towards human beings he will not support non-ethical targets (7).

Finally additional limitations and suggestions for further research are given:

- The model does only allow an indirect differentiation of the trust concept with regard to individual and collective trust in organizations (3).
- The requirements on trust are different in different cultures and countries (6).
- It would be of interest to evaluate the level of employee competence utilization in a company with a very low trust level (7).
- The impact of single leaders is not taken into account although they influence the correlation. Further leadership levels and personality levels are important but not conceptualized (7).

Overall the interviews were very in reflecting the findings and an illuminating addition to a purely literary approach. As the experts are very much specialized in their respective fields they took a very comprehensive approach towards the findings and in this way contributed to a multi-angle perspective and critical reflection of the results. Another valuable aspect was the involvement of one company being interviewed in addition to the main empirical study (see comments 7). In an open qualitative discussion results were reflected upon with the manager of this company. The general plausibility of all results was confirmed.

3.5 IMPLICATIONS FOR STRATEGIC MANAGEMENT

There are good reasons not to do without trust. Trust reduces complexity, creates security and opens greater potentials than just the abstinence of control costs; potentials that would not be available under different circumstances. This is of major interest as competent action is bound to problem solutions under insecurity. Trust catalysis this process. Also there are endless situations that don't allow control; the macro environment of organizations even triggers this effect developing towards digitalization, individualization and flexibility also with regard to working schedules. We cannot know everything, we have to trust. Consequently trust is a resource of strategic relevance; it is 'monetary free' and grows with usage; an investment that amortizes perfectly. Incorporated in people, their interactions and the structure of cooperation between them, trust and its outcomes provide a competitive advantage that is not easily copied. But: trust is also vulnerable and may diminish or be damaged if broached to issue or opportunism is involved, at high price to the company. It does not only elude a purely strategic approach, its holistic concept and particular character creates challenging requirements on the personal characteristics, relational abilities and contextual behaviors of managers. Being responsible for the firm's chosen direction, which also defines the organization's behavior, management

determines whether a culture of trust will develop and unfold or not. But it may not produce trust; it may develop frameworks based on the discovered key points and set an example with their own behavior promoting these. In order to provide such an approach the concluding results based on the underlying research model have been translated into a strategic scorecard, providing key aspects valid implementing a suitable framework for a culture of trust directed at the realization of employees' competencies. This scorecard translates strategy into measurable goals, grouped along with four perspectives: finance, customer service, internal processes, and learning and growth perspective; [397] a planning and control instrument, which is widely used. [398] The implementations of the strategic options shown below require strategic programs as well as the consideration of organizational and personal circumstances. [399]

Table 3. 8 Balanced-Scorecard approach - management implications and measurable

Field	Measurable implications for strategic management
Financials	**The immaterial 'monetary free resource', 'trust', can be converted into material capital.** -> Investments are needed in attitude, frameworks and time. -> Frameworks need to comprise of personal characteristics, relational elements and contextual aspects illuminated in the research model. -> Real trust derives from relationships over time. -> Eroding trust or non-existent trust is of high cost.
	The financial company value increased with investment in social capital. -> Trust is a catalyzer that realizes potential otherwise not available, compensating risk, complexity and insecurity. -> Realized potential creates non-replicable sustainable competitive advantage.
	Trust is seen as a social form of control -> needed where efficiency and behavioral control is not possible.
	Increased retention times -> are indirectly supported by competence utilization. -> reduce costly replacing processes and uncompensated performance differentials.

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[397] Steinmann & Schreyögg (2005), p. 270
[398] Kaplan & Norton (2004), p. 12
[399] Bolzern-Konrad (2015), p. 352

Customers	**Intra-organizational trust** **->** positively influences the perceived trust of customers. **->** Internal achievements result positively in external achievements.
	Continuous improvement activities, **->** a key aspect in business excellence systems. -> support the fulfillment customer needs. -> support technology readiness
Internal Process	**Trust-vignette** Allowance of constructive and seriously taken criticism. **Trust-vignette** Open and fair handling of failures is a condition. -> Trust needs to be challenged and reflected upon to support innovation. -> Install institutionalized room for 'challenge'and 'multiangulation' – room to maneuver. -> This room is supported by business excellence systems.
	Trust-vignette Acceptance of decisions, clear decisions and follow up on results. -> Coordination mechanisms based on clear goals and shared values are a basis for trust.
	Network notion The opportunity for goal oriented regular relationships needs to be provided and allowed to support intrinsic motivation to invest in relationships. -> Social capital renews itself if it is voluntary and reciprocal. -> Voluntary social capital is a renewable resource. -> Voluntary social capital diminishes in value if it is not renewed.
	Alignment of values and norms **->** is a condition for 'competence-realizing' relationships.
Learning and Growth	**Trust-vignette** Problem solution rather than problem description. -> Problem solving is a key element of competence utilization. -> Clear and meaningful targets are a condition.
	Trust-vignette Adequate freedom in decision situations is a necessity. -> Professionalism needs to be supported and allowed. -> Pride in the employees' own work and that of the company should be the target.

	Leadership maturity
	A business excellence system might support leadership maturity.
	-> is influenced by personality and socialization, leadership can make use of the tools of a business excellence system and may also be supported by the system in its own development.
	-> The system itself requires trustful behavior in order to be effective in terms of continuous improvement processes.
	-> Direction, being inherent in the system may support the development of less mature leaders until they become experienced.
	Trust-vignette
	Work efficiency in the absence of a leader.
	Trust is seen to support all fields of the willingness matrix: ' *I cannot / I don't want to, I cannot / I want to, I can / I don't want to and I ca n and want to.*'
	In special cases the allowance of 'non-willingness' may also be a sign of trust.
	Also every employee needs the chance to receive training in order to be able to achieve the targets of the respective job.
	But a basic non-willingness should not be tolerated in the long run resulting in dismissal.
	'Articulation of trust'
	Trust can be damaged or destroyed if specifically articulated or the 'if and why' are discussed.
	-> Trust cannot be dealt with directly since it touches on different levels of perception including emotional and objective elements.
	-> It only becomes manifest in specific frameworks and particular indicators.
	-> Bing based on authenticity it can only be tapped through appropriate behavior.
	A positive management attitude towards trust is critical for the trust process.
	-> Only those who trust will be rewarded by the trust of his employees.
	-> Accountability and clear, meaningful goals count.
	-> Relationships need to be based on benevolence, integrity, predictability and ability.
	-> Opportunism is the strongest barrier to the development of trust.
	-> Trust should not be used in a calculative manner; it should not to be used purely strategically.

Source: Author's design based on strategy map

With trust being a latent variable that becomes manifest only in specific frameworks, the balanced scorecard approach should not only provide a measureable approach towards trust; playing a key role for strategic management, but may also be seen as a valuable competitive advantage for organizations. Finally, strategy is important in order to consolidate the resource of

trust with the resource of competence. Referring to the outcomes of the expert interviews some limiting factors should also be mentioned.

- The approach does not provide a guarantee of the ethical grounding of a company's targets. It might only be assumed that if a manager is generally positive oriented towards human beings he will not support non-ethical targets.

- The developed framework supports trust building in organizations. But its success might differ depending on the different characters involved. Some employees need high trust organizational cultures whereas others might need stronger distrust elements, in which impulses arise from scrutinizing and challenging. However it can be assumed that the combined view on individual and collective trust in organizations levels out these effects.

- The ratio of goals and delegation has to be balanced. Strong goals might inhibit responsibility taking. Extensive delegation might induce insecurity. Business excellence may bridge here in terms of promoting self-directed teams.

- One result of the empirical study is that management and employees obviously have different views. Whereas management is more interested in productivity figures, employees care much more about engagement, commitment and satisfaction.

- Would a culture of fear also lead to performance? No, it wouldn't. Fear does not support the ability to take responsibly. Fear is not based on reliability and benevolence. Competencies might be utilized short term, but they are neither sustainable nor used to their full potential.

- Supporting elements of business excellence systems need to be carefully monitored towards a too systematically implementation. The danger is that they simply degenerate to a cover which even might be inhibiting trust. Not only business excellence elements have the potential to promote trust, if system is not linked to trust itself it will only perform on short term basis. If the philosophy is not in a mutual balance with real trust it tends to be based on calculative trust levels and may as a result be perceived negatively.

CONCLUSIONS

In order to finalize the study, in a full cycle from theory to the final results, the author comes to the following main conclusions.

1. A comprehensive literature review in the field of trust, competencies and business excellence has made it possible to identify a need for a new integrative model on trust in organizations, which takes employee competence utilization as a result of trust-based-actions into consideration. Generally, an integrative approach combining different levels of trust such as character, relationship and context are needed, as one direction alone shows only a limited perspective.

    -   Leading over to the sub-question, *'Do the results support the integration of the trust action into the model?* In general results support the integrative approach of the model including character, relationship and trust-based-action. It was shown that trust induces employee competence utilization only if action is involved. Not before the behavioral part is included, competence utilization is visible as a positively performed action. At the same time trust is not manifest before the action resulting form it is performed. So in a sense the action provides evidence that trust achieves the critical mass to spur trust-based-action.

    -   Indicators related to networks are strongly correlated with the usage of employee competencies. This underlines the assumption that trust needs to be experienced through relation and behavior (high level trust).

2. The main research question was successfully answered as follows. *'Does trust perceived by an employee towards management lead to a higher utilization of their own competencies?* In general it can be stated that based on the empirical results, the correlation between trust and employee competence utilization is supported. Based on the sociological background and the complexity of the trust concept a medium to low but positive and significant correlation was not unexpected. This is because theoretical results support the idea that trust never can and should not be the only impact factor as elements of control and distrust should always be involved in order to avoid blind trust. Further to this strategic management is embedded in internal and external factors, influenced by macro- and microenvironment that are expected to significantly impact the 'ability in use' as well.

- Founded on a sample of 206 questionnaires the hypothesis, *'The higher the level of (perceived) trust, the higher the level of employee competence utilization',* was not falsified. This conclusion can be made within the context of the research study, referring to the underlying trust concept placed in the organizational field and a business excellence context. However a more detailed evaluation was necessary in order to discover significant elements.

- To answer the sub-questions, *'Which aspects of the chosen trust concept have the strongest impact on employee competence utilization?'* Empirical results show that the perceived accountability of the trustee as well as shared norms between management and employees do have the highest impact on the realization of the employees' potential. Further to this, the ability of the trustor to take responsibility was of high importance. Numbers also suggest that especially relationship aspects impact the correlation positively, which in turn reiterates the placement of trust within the social capital concept.

3. Being of strategic interest but not tangible through a purely strategic approach the requirements on strategic management are challenging; however the realization of discovered key points for trust-supporting-frameworks are seen as a valuable competitive advantage for strategic work.

- Consequently the sub-question therefore was positively answered. *'Shall the mission of 'strategic business management' be the creation of mutual trust?'* Trust needs management attention and is of strategic importance as it is a catalyzer to open potential otherwise not available. However; trust puts high demands on managers as it needs to be balanced between a calculative approach and the requirements of a fragile resource.

- Benevolence and goodwill have to be involved in the process to protect against opportunism and exploitation and achieve a sustainable approach to human resources.

- The allowance of constructive seriously taken criticism, problem solving attitude, the acceptance of decisions are further key points for trust supporting frameworks that have to be accepted and shown through behavior. These are also valid to be integrated in the balanced scorecard approach.

- Strategy is important in order to consolidate the resource of trust with the resource of competence.

4. The theoretical analyses as well as empirical results have shown that the concept of trust and the philosophy of business excellence are closely related. In order to further investigate on a mutual basis the development of an umbrella perspective on the business excellence concept was a need.

   - Management also has to consider trust correlates like control and distrust in their approach because theory has shown that the trust concept can be positively combined with these aspects. A very positive form of control is feedback. Essential 'institutionalized challenge' and 'multiangulation', being connected to distrust and forms of bridging social capital, are considered as 'trust supports' with regard to the perception of business excellence.

   - This aspect leads to the last sub-question, *'Is business excellence to be seen as a system that positively impacts the creation of mutual trust?'* The philosophy of business excellence helps to implement room for institutionalized challenge that provides a channel for ~~allows~~ overcoming fear and securing the fair handling of failures. This 'room' supports a culture of trust and allows 'multi-angulation', as it opens up alternative points of view on specific topics. The integration of business excellence elements also represents the idea and underlines the importance of system-trust within the organizational trust model.

   - Developed and tested 'trust-vigniettes support the mutual basis of the trust concept and the philosophy of business excellence. These are valid to be integrated in the balanced scorecards approach.

5. Generalizability of results can be assumed within the specific context of German medium sized manufacturing companies coping with defined requirements of a business excellence umbrella system.

6. If we want employees not just to work to rule or want to motivate an employee who has 'given up', if we want employees to contribute enthusiastically to the organizational success, organizations need to establish an atmosphere of trust. The integrative model developed within this research is intended to support this approach.

SUGGESTIONS

Summarizing the managerial implications the following suggestions for management and practitioners are seen to be valid.

1. The positive impact of trust on employee competence utilization needs top management attention, as the realization of employee competencies leads to a sustainable competitive advantage of the company; an aspect being of strategic importance.

2. Strategic management determines whether a culture of trust will develop and unfold or not. Therefore the implementation of ‚trust frameworks' and ‚trust- vignettes' into business life is advocated as being developed in this research study.

3. The evolved balanced scorecard approach is suggested in order to translate the new integrative model into key aspects valid for a suitable framework for trust.

4. Based on the recommended course of action, implemented through the balanced scorecards approach, the measurement of indirect trust indicators is supposed.

5. Also the integration of trust measurables into business excellence systems is recommended and further supports the aspect of leadership maturity within the concept.

6. Likewise institutionalized failure handling and rooms for challenge, being the core of business excellence systems, should be integral part of trust frameworks.

7. Especially in asymmetric relationships a general positive attitude of management towards people and trust as a value is critical to initiate the trust process. Management must have the courage to trust in its employees first; one of its elementary forms of expression would be the allowance to take responsibility. As shown in the theoretical section the initial trust performance is of high importance especially in asymmetric relationships.

8. Further to a positive attitude, the trust concept creates challenging requirements on the personal characteristics, relational abilities and contextual behaviors of managers which are important to establish frameworks that allow the realization of its employees' competencies. Specifically accountability, shared norms and freedom to take responsivity need to be proven by behavior.

9. Therefore providing an atmosphere of trust should be an immaterial cultural target not just a material goal; the approach to trust is neither purely calculative, nor a harmony concept. Being aware of the own vulnerability management has to take the risk first, allowing its employees to follow. Goodwill and benevolence are basic conditions to do so, especially in order to avoid opportunism being the major threat of trust; predictability and integrity are decisive factors as well.

Also there are suggestions to scientists on trust, competence and business excellence derived from the learnings of the research study.

10. In order to further deepen the understanding on the trust – employee competence utilization relation it could be investigated on:

- the trust - employee competence utilization - concept in different cultures. Cross-cultural literature suggests that trust may be different across cultures. The differences between high task versus high relationship oriented cultures have especially been subject to research.

- the question, whether job security or job insecurity-effects override trust- effects. There are studies in place that conclude that job security impacts trust in management. Other studies thus state that these effects can be overridden by transparency, material equality and procedural justice.

- the idea, that self-efficacy might impact on trust propensity. A high self-efficacy might promote the willingness to trust. On the other hand humans with high self-efficacy might not need high trust levels. Further to this it is still open as to whether self-efficacy is the basis for trust or whether it increases through the practice of trust.

11. Also the impact of time, hierarchical levels and gender could contribute to a better understanding on the correlation. It can be assumed that new job entrants have different needs regarding trust than mature long term employees. Also different quality levels of trust need different time durations in order to develop. Although of central importance, initial trust may be seen as just the starting point of in the whole trust process: whilst high levels of trust need patterns. Further to this short term interviews and quantitative surveys may only show a 'snap shot' and not the entire picture. The employee level of qualification assumingly has impact on the possible delegation range. It can be assumed that women and men show different propensities to trust and need different amounts of trust due to their experiences throughout education and the roles they are in.

12. The evaluation on a stepwise approach to the research model could also be meaningful to further develop and strengthen the model. As retention and productivity are much lower when it comes to correlation, they might have to be either exposed to a higher number of different input factors or have to be seen as a subsequent step following commitment, satisfaction and engagement.

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APPENDIX

Content

APPENDIX 1 SPECIFICATION OF INDUSTRY - STATISTICAL DATA ON THE INDUSTRY CONTEXT

Table: Companies in the selected industry sector

Companies 2012 in Germany in the economic sector B-N,P-S (WZ 2008) as regard to employees and sales clusters

Companies with sales from … to … Euro [1]	Companies in total [2]	Companies from … to … employees with social insurance (Anzahl)										
		0	1	2 - 4	5 - 9	10 - 19	20 - 49	50 - 99	100 - 249	250 - 499	500 - 999	1.000 and more
below 100.000	1.977.267	1.342.430	307.031	198.374	72.471	30.186	16.874	5.880	2.952	697	251	121
100.000 - 250.000	707.449	370.677	157.191	154.219	20.741	2.580	989	471	419	117	37	8
250.000 - 500.000	373.179	109.072	51.555	137.733	63.972	8.564	1.311	400	365	136	54	17
500 - 1 Mio.	245.773	42.060	17.443	61.164	84.916	34.510	4.593	438	341	176	97	35
1 Mio. - 2 Mio.	154.553	18.771	6.113	20.892	41.458	48.372	16.656	1.612	387	144	92	56
2 Mio. - 5 Mio.	110.341	10.718	2.759	7.570	15.703	30.309	34.996	5.955	1.861	232	139	99
5 Mio. - 10 Mio.	42.653	3.050	643	1.885	2.824	6.159	16.143	8.614	2.575	536	115	109
10 Mio. - 25 Mio.	28.895	1.682	270	821	1.274	2.191	7.014	8.081	6.017	1.035	379	131
25 Mio. - 50 Mio.	11.165	503	53	167	294	500	1.340	2.322	4.282	1.220	310	174
50 Mio. - 100 Mio.	6.073	227	23	69	121	185	495	729	1.870	1.710	490	154
100 Mio. - 250 Mio.	3.708	118	14	41	45	85	228	271	710	940	887	369
250 Mio. - 500 Mio.	1.304	26	5	5	12	18	58	64	165	200	308	443
500 Mio and more	1.072	28	.	6	6	12	36	35	87	102	145	615
Total	3.663.432	1.899.362	543.100	582.946	303.837	163.671	100.733	34.872	22.031	7.245	3.304	2.331

[1] Sales for members estimated
[2] Unternehmen Companies with mit taxable sales and/or employees with social insurance within the reporting year.
. Due to confidiality blocked

Provided by Institut für Mittelstandsforschung

Source: National department of statistics (2014)

APPENDIX 2 EMPIRICAL STUDY - TABLE OF PILOT STUDY INTERVIEW PARTNERS - EXPERTS

Table: Interview partner – pilot study with experts

	Company / Institute	Contact	Location
1	University for Applied Sciences, Rosenheim	Professor	Rosenheim / Kufstein
2	Center of excellence - University for applied Sciences, Ansbach	Head of Institute	Ansbach / Munic
3	COMPANY 1	Managing Director	Raubling
4	COMPANY 2	Managing Director	Obernburg
5	Mainsite Services – Competence Center	Manager Operational Excellence	Obernburg
6	University for applied Sciences, Ansbach	Academic Director	Ansbach

Source: Author's table based on pilot study with experts

Business Excellence Circle 2014, Total Productive Management 2014 Congress in Cologne, (Management Circle AG, 2014 / CETPM Ansbach

APPENDIX 3 EMPIRICAL STUDY - MANAGEMENT INTERVIEW LINE

Type of questions used (Sample of a quantitative question)

Would you name your company innovative?

Does completely apply					Does apply not at all
	1	**2**	**3**	**4**	**5**

How many projects for continuous improvement are installed in your company?

❑	❑	❑	❑	❑
<1	1-2	3-4	5-6	>6

Source: Author's Table - 5 point Lickert-scale used in the empirical study

Management Interview line

QUALITATIVE FRAGEN / QUALITATIVE QUESTIONS

1. Wenn Ihr Unternehmen eine Person wäre, wie würden Sie ihren Charakter beschreiben? Hinsichtlich Führungsstil, Reziprozität, Motivation, Konsens und Kooperation, Bedeutung der Verbundenheit mit dem Unternehmen.
   If your organization where a person, could you describe its character? As regards to leadership style, reciprocity, motivation, consensus and cooperation, importance of belonging and connectivity to the company

2. Welche Werte verbinden Sie mit Ihrem Unternehmen? Gibt es gemeinsame Aktivitäten, Duzen Sie sich untereinander?
   Which values do you associate with your company? Do you organize joint activites in your company? Are you on a first-name basis or do you address each other formal?

3. Welche Werte, die Sie mit dem Unternehmen verbinden, finden Sie in der nachfolgenden Liste wieder? Which values that you relate to your company do you find in the subsequent list?

WERTE

Qualität / Quality	☐
Innovation / Innovation	☐
Verantwortung / Responsibility	☐
Kompetenz / Competence	☐
Leistungsbereitschaft / Willingness to perform	☐
Integrität / Integrity	☐
Teamgeist / Team spirit	☐
Offenheit / openeness	☐
Respekt / Respect	☐
Aufrichtigkeit / Honesty, frankness	☐
Fairness / Fair mindset	☐
Vertrauen / Trust	☐
Lernbereitschaft / Willingness to learn	☐
Konfliktfähigkeit / Problem solving ability	☐
Andere / Others...	☐

4. Wie bewerten Sie als Führungskraft folgende Aussagen über Ihren Führungsstil? How do you as leader evaluate your leadership style?

	Sehr unwichtig	-			Sehr wichtig
	1	2	3	4	5
Das Vertrauen der Beschäftigten zu erhalten ist	☐	☐	☐	☐	☐

„Nichts kann den Menschen mehr stärken als das Vertrauen, das man ihm entgegenbringt"
„Nothing can strengthen more than the trust that is granted to somebody"
Paul Claudel (1868-1955)

The interview is embedded in the basic research question of the dissertation theme:
Does a culture of trust lead to higher ECU?

EMPIRICAL STUDY
SEMI-STRUCTURED INTERVIEW - COMPANY EXPERTS:
Die Daten werden vertraulich behandelt / The information is taken confidential

- Date/Datum- Location/Ort:
- Expert Name/ Experten Name:
- Position / Function:
- Organization / Unternehmen:
- Branch / Branche:
- Number of employees / Anzahl der Beschäftigten:
- Turnover/ Umsatz:
- Main experience/ Erfahrung:
- Age/Alter: <= 35 ☐ 36-40 ☐ 41-50 ☐ 51-60 ☐ >= 60 ☐
- Gender/Geschlecht: Male/männlich ☐ Female/weiblich ☐
- Profession/Beruf:

Thank you very much for dedicating your time to this survey!
Vielen Dank für Ihre Mitarbeit!
Britta Bolzem-Konrad

mir…					
Auf ein ausgewogenes Verhältnis zwischen Leistungserwartung und Vergütung zu achten ist mir…	☐	☐	☐	☐	☐
Wichtige Entscheidungen im ganzen Unternehmen transparent zu machen ist mir…	☐	☐	☐	☐	☐
Das Einbeziehen der Beschäftigten in Entscheidungsprozesse ist mir…	☐	☐	☐	☐	☐
Teamorientiertes Führungsverhalten ist mir…	☐	☐	☐	☐	☐
Zu erfahren, welche Fehler passieren ist mir…	☐	☐	☐	☐	☐
Die Anerkennung positiver Leistung der Beschäftigten ist mir…	☐	☐	☐	☐	☐
Das Beschäftigte für Fehler zur Verantwortung gezogen werden ist mir…	☐	☐	☐	☐	☐
Freiräume für Kreativität und Lernschleifen (z.B. Team Runden) sind mir…	☐	☐	☐	☐	☐
Die Zusagen einzuhalten, die wir unseren Beschäftigten machen, ist mir…	☐	☐	☐	☐	☐

5. Wie würden Sie die hierarchischen Strukturen in Ihrem Unternehmen beschreiben? Hinsichtlich Art der Hierarchie, des Grades der Zentralisierung, der Formalisierung, der Standardisierung und der **Spezialisierung?**
How would you describe the hierarchical structures in your company? Regarding hierarchy, level of centralization, formalization, standardization and specialization?

6. Wie ist die Anzahl der hierarchischen Ebenen im Unternehmen? How is the number of hierarchical levels within the company?

☐	☐	☐	☐	☐
>10	10 -8	7-6	5-4	3-1

7. **Gibt es in Ihrem Unternehmen eine Gruppe von wichtigsten Ansprechpartnern? Wie bringen Sie die Erwartungen der Beschäftigten mit den Erwartungen der Geschäftsführung in Einklang? Führen Sie z.B. Zielvereinbarungsgespräche?**
Is there a group of important contacts/ key persons in your company that stand for the opinion of the company? How do you balance the expectations of the employees with the expectations of the company? Do you execute regular target setting agreements?

8. Wie beurteilen **Sie** in der Praxis das Thema Vertrauen und verantwortliches Handeln in Ihrem Unternehmen? How do you evaluate in praxis the issue of trust and responsible action?

	Sehr klein		-		Sehr groß
	1	2	3	4	5
Das Vertrauen der Beschäftigten in die Geschäftsführung ist…	☐	☐	☐	☐	☐
Die Gemeinsamkeiten zwischen Zielen der Geschäftsführung und den Beschäftigten sind…	☐	☐	☐	☐	☐
Das Verständnis der Maßnahmen der Geschäftsführung ist mir…	☐	☐	☐	☐	☐
Das Einbeziehen der Beschäftigten in Entscheidungsprozesse ist mir…	☐	☐	☐	☐	☐
Der Anteil der Fehler, für die Beschäftigte verantwortlich gemacht werden, ist…	☐	☐	☐	☐	☐
Zu erfahren, welche Fehler passieren ist mir…	☐	☐	☐	☐	☐
Der Anteil der Fehler, von denen die Geschäftsführung Kenntnis erlangt ist…	☐	☐	☐	☐	☐

9. Wie sehen **Sie** die Bedeutung von Innovation in Ihrem Unternehmen? Liegen diese eher in Bereichen der Produkte, Produktion, der Prozesse, der Organisation, der Kommunikationsstrukturen? Vertrauen die Mitarbeiter in Innovationen und führen diese zu Veränderungen?
How do you see the value of innovations within your company? Are they more often in the area of products, production, processes, organization, communication structures? Do your employees trust on innovations and do they lead to changes?

10. **Würden Sie Ihr Unternehmen als innovativ bezeichnen?** Would you name your company innovative?

Trifft überhaupt nicht zu	☐	☐	☐	☐	☐	Trifft völlig zu
	1	2	3	4	5	

11. Wenn **Sie** an bisherige Veränderungen, Neuerungen, Innovationen denken, welche waren für Ihr Unternehmen in den letzten Jahren am wichtigsten?
If you think on achieved changes, innovations, which were the most important ones for your company in the last years?

12. Wie sehen **Sie** grundsätzlich das Maß an Fremd-bzw. **Selbstkontrolle in Ihrem Unternehmen? Hinsichtlich:** Übertragung von Verantwortung, Maß an Kontrollverzicht, Vertrauensvorschuss, Eigenverantwortung und Handlungsspielräumen.
How do you see basically the level of external-control versus self-control? Regarding: empowerment, abstinence of control, trust advancement, self-responsibility and freedom of action.

13. Überwiegt die Fremd- oder **Selbstkontrolle in Ihrem Unternehmen? Does** the external control outbalance the internal control?

Starke Fremdkontrolle	☐	☐	☐	☐	☐	Starke Selbstkontrolle
	1	2	3	4	5	

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14. Wie kontrollieren / honorieren Sie die Arbeitsleistung Ihrer Mitarbeiter? Tendieren Sie eher zur Führung durch Kontrolle oder zur Führung durch Honorierung (muss nicht finanziell sein)? How do you control / reward the job performance of your employees? Do you tend more to control or more to reward?

Ehr Kontrolle					Ehr Honorierung
1	2	3	4	5	
☐	☐	☐	☐	☐	

15. Wie zeigen sich in Ihrem Unternehmen bestehende Kommunikationsstrukturen? Wie funktioniert Kommunikation? Besteht Kommunikation auch zwischen Abteilungen? In welchem Umfang und wie schnell informieren Sie Ihre Mitarbeiter über wichtige Entscheidungen?
How do communication structures appear / are visible in your organization? Does communication also exist between different departments? To which extend and how fast do you inform your employees about important decisions?

16. Wie intensiv ist die Zusammenarbeit zwischen den einzelnen Abteilungen oder Teams? How intensive is the cooperation between departments or teams?

Nur auf Anweisung					Selbstverständlich
1	2	3	4	5	
☐	☐	☐	☐	☐	

17. Haben Ihre Mitarbeiter die Möglichkeit an Meetings teilzunehmen, die ihre Arbeit betreffen? Do you have a chance to participate in meetings that touch your work?

Nie					Sehr häufig
1	2	3	4	5	
☐	☐	☐	☐	☐	

18. Wie würden Sie die Zusammenarbeit der unterschiedlichen Beschäftigungsgruppen beschreiben? How would you describe the cooperation between different employee groups?

Die Zusammenarbeit...	Sehr schlecht			-	Sehr gut
	1	2	3	4	5
Zwischen jüngeren und älteren Beschäftigten ist...	☐	☐	☐	☐	☐
Zwischen Leitungspersonal und Personal ohne Leitungsfunktion ist...	☐	☐	☐	☐	☐
Zwischen Frauen und Männern ist...	☐	☐	☐	☐	☐
Zwischen Akademikern und Nicht-Akademikern ist...	☐	☐	☐	☐	☐
Zwischen Produktion und Verwaltung ist...	☐	☐	☐	☐	☐

Zwischen Forschung und Entwicklung und Produktion ist...					
1	2	3	4	5	
☐	☐	☐	☐	☐	

19. Finden in Ihrem Unternehmen gemeinsame Aktionen statt – wie z.B. gemeinsames Abendessen, Ausflüge oder Veranstaltungen? Do you have social events in your company - like company dinner, trips or events?

Überhaupt nicht					Sehr stark
1	2	3	4	5	
☐	☐	☐	☐	☐	

20. Wie zeigt sich in Ihrem Unternehmen die Beteiligung von Mitarbeitern? Werden die Mitarbeiter aktiv eingebunden? How can the participation of employees be seen in your company? Are employees actively involved?

21. Inwieweit entspricht die alltägliche Praxis in Ihrem Unternehmen folgenden Aussagen zum Thema transparente Führung und Mitarbeiterbeteiligung? In how far does the practical experience support the following statements?

	Trifft voll zu			-	Trifft gar nicht zu
	1	2	3	4	5
Im Unternehmen herrscht Lohntransparenz	☐	☐	☐	☐	☐
Das Management stellt sich regelmäßig der Bewertung durch die Beschäftigten (z.B. anonyme Mitarbeiterbefragungen)	☐	☐	☐	☐	☐
Bei wichtigen Entscheidungen werden die Beschäftigten regelmäßig am Entscheidungsprozess beteiligt	☐	☐	☐	☐	☐
Mit jedem Mitarbeiter/Mitarbeiterin wird gemeinsam ein Qualifizierungsplan (Fort-und Weiterbildung) entwickelt	☐	☐	☐	☐	☐

22. Wie gut kennen Sie Ihre Mitarbeiter? Sehen und sprechen Sie sie regelmäßig? How good do you know your employees? Do you see them and talk to them regularly?

Ganz selten					Sehr häufig
1	2	3	4	5	
☐	☐	☐	☐	☐	

23. Sind die Türen zu Ihrem Büro für jeden geöffnet? Are the doors to your office open for everybody?

Trifft überhaupt nicht zu					Trifft völlig zu
1	2	3	4	5	
☐	☐	☐	☐	☐	

How is the importance of improvisation and flexibility as regards to the continuance of working procedures?

Sehr gering	1	2	3	4	5	Sehr hoch
	☐	☐	☐	☐	☐	

31. **Welche informellen Regeln gibt es in Ihrem Unternehmen? Welche informellen Regeln regeln die Zusammenarbeit zwischen Ihren Mitarbeitern?**
Which informal rules are existing in your company? Which informal rules affect the cooperation between your employees?

32. **In welcher Form unterstützen sich Ihre Mitarbeiter gegenseitig? Im Hinblick auf: Zeitdruck, Mehrarbeit und Überstunden.**
In which way do your employees support each other. With respect to: time pressure, high workload and extra work and overtime?

33. **Wie gehen Ihre Mitarbeiter mit Zeitdruck um?** How do you handle time pressure? High resistance - go the extra mile.

Hoher Widerstand	1	2	3	4	5	Hoher Einsatz
	☐	☐	☐	☐	☐	

34. **Auf welche Art und Weise betreiben Sie Personalentwicklung und welche Weiterbildungsangebote gibt es?** In which form do you practice human ressource development and what are your qualification offers?

35. **Welche Kariere Chancen haben Ihre Mitarbeiter in Ihrem Unternehmen und wie können Sie sie nutzen?** Which career chances do your employees have and how can the use them?

36. **Wie sehen Sie Ihr Unternehmen in 10 Jahren? Würden Sie den Charakter anders beschreiben?**
How do you see your company in 10 years? Would you describe the character different?

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24. **Können Ihre Mitarbeiter mit Beschwerden oder anderen Anliegen zu Ihnen kommen?** Are the employees allowed to contact you with dis-concern or other important issues?

Nie	1	2	3	4	5	Immer
	☐	☐	☐	☐	☐	

25. **Machen die Mitarbeiter häufig Gebrauch davon Gebrauch, d.h. nutzen die Mitarbeiter die „offene Tür"?** Do the employees use this opportunity frequently? (door open)

Nie	1	2	3	4	5	Sehr häufig
	☐	☐	☐	☐	☐	

26. **Wie gehen Sie im Unternehmen mit Konflikten um? (Beschäftigte mit dem Vorgesetzten und Beschäftigte untereinander) Hinsichtlich: Erläuterung von Entscheidungen, gerechter Verfahren, Fairness, Verantwortungsbewusstsein, Einhaltung von Versprechen, Vertrauen der Mitarbeiter in die Geschäftsführung, Arbeitsplatzsicherheit, Anerkennung, Konkurrenz, Leistungsorientierung**
How do you handle conflicts? Between employees and as regards to the employee leader relation? Regarding Explanation of decisions, fair procedures, fairness, responsibility, promise keeping, trust of employees in the management, job security, recognition, competition, performance orientation

27. **Haben Sie das Gefühl, dass in Ihrem Unternehmen offen mit Fehlern umgegangen wird?** Do you have the impression that in your company people are able to admit a failure?

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft immer zu
	☐	☐	☐	☐	☐	

28. **Wie würden sie den Umgangston in Ihrem Unternehmen beschreiben?** How would you describe the „conversation sound"/ the casual conversation within your company?

Sehr formell	1	2	3	4	5	Sehr locker
	☐	☐	☐	☐	☐	

29. **Wie schätzen Sie das Verhältnis von formellen Aufgabenbeschreibungen und informellen Arbeitsroutinen ein?** How do you estimate the relation between formal job-descriptions and informal working routines?

Stark formal	1	2	3	4	5	Stark informell
	☐	☐	☐	☐	☐	

30. **Welche Bedeutung haben Improvisation und Flexibilität für die Aufrechterhaltung der Arbeitsabläufe?**

QUANTITATIVE FRAGEN / QUANTITATIVE QUESTIONS

1. Wie viele Jahre sind Ihre Mitarbeiter durchschnittlich in Ihrer Firma?
What is the average retention time of your employees in your company?

< 1 year	1 – 3 years	4- 6 years	7 – 10 years	> 10 years
❑	❑	❑	❑	❑

2. Wie war der Trend der durchschnittlichen Mitarbeiterzugehörigkeit in den letzten 5 Jahren?
How was the trend of retention in the last 5 years?

Stark fallend	Leicht fallend	Gleichbleibend	Leicht steigend	Stark steigend
❑	❑	❑	❑	❑

3. Wieviel Prozent Ihrer Projekte sind erfolgreich abgeschlossen worden?
What is the number for successful finalized projects?

< 10 %	10-30%	31-50%	51-70%	>70 %
❑	❑	❑	❑	❑

4. Wie ist die Produktivität pro Mitarbeiter? In 1000 €
What is the number for the turnover per employee? In 1000 €

< 50 €	51-100 €	101-200 €	201-400€	>400 €
❑	❑	❑	❑	❑

5. Wie stark hat sich die Produktivitätszahl in den letzten 5 Jahren verändert?
How strong did the productivity number it change within the last 5 years?

gering	leicht	mittel	stark	sehr stark
❑	❑	❑	❑	❑

6. Wie hoch ist die Anzahl der Verbesserungsvorschläge pro Mitarbeiter?
What is the number of improvement proposals per employee?

< 0,5	0,6-1	1,1 – 1,5	1,6-2	>2
❑	❑	❑	❑	❑

7. Wie hoch ist die Anzahl der Patente in den letzten 3 Jahren in Ihrem Unternehmen?
How high is the number of patent applications in the last 3 year?

< 1	1-2	3-4	5-6	>6
❑	❑	❑	❑	❑

8. Wie viele neue Prozesse führen Sie durchschnittlich in Ihrem Unternehmen im Jahr ein?
What is the average number of new process introduced per year in your company?

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9. Wie hoch ist der Anteil von internen zu externen Besetzungen von Managementpositionen?
What is the percentage of internal versus external recruitments for management positions?

< 1	1-2	3-4	5-6	>6
❑	❑	❑	❑	❑

10. Wie hoch ist die Anzahl der regelmäßig als Projektmanager eingesetzten Mitarbeiter?
What is the number of employees used regularly as project leader?

< 10 %	>10 < 30 %	>30 < 50%	>50 < 70 %	>70%
❑	❑	❑	❑	❑

11. Wie hoch ist der durchschnittliche Grad der Erfüllung von Zielvereinbarungen?
How high is the degree of fulfillment in target agreements?

<10	10-30	3-4	5-6	>6
❑	❑	❑	❑	❑

12. Wie hoch ist der Anteil an Zielvereinbarungen mit mehr als 100 % Zielerreichungsgrad?
How high is the number of target agreements with more than 100 % fulfillment?

< 50%	51-60 %	61-70%	71-80%	>80 %
❑	❑	❑	❑	❑

13. Wie viele Projekte zur kontinuierlichen Prozessverbesserung (KVP) sind in Ihrem Unternehmen installiert?
How many projects for continuous improvement are installed within your company?

< 10 %	10-20 %	21-40%	41-60 %	>60%
❑	❑	❑	❑	❑

14. Wie hoch ist der Anteil der Mitarbeiter, die aktiv am kontinuierlichen Verbesserungsprozess mitarbeiten?
How high is the share of employees that work active in continuous improvement processes?

< 1	1-2	3-4	5-6	>6
❑	❑	❑	❑	❑

☐	☐	☐	☐	☐
< 10%	11-30 %	31-50%	51-60%	>60 %

15. Wie hoch ist der durchschnittliche Krankenstand in Ihrem Unternehmen in Tagen pro Person und Jahr? How high is the status of employee's illness in days per person and year (sickness rate)?

☐	☐	☐	☐	☐
>8	6-7	4-5	1-3	<1

16. Wie häufig werden in Ihrem Unternehmen Mitarbeiterbefragungen durchgeführt? How often do you execute employee satisfaction evaluations in your company?

☐	☐	☐	☐	☐
>10 Jahre	Alle 10-8 Jahre	Alle 7-5 Jahr	Alle 4-2 Jahre	Jedes Jahr

17. Wie schnell sind wichtige Informationen bei Ihren Mitarbeitern von ‚Top to bottom'? How fast do your employees receive important information from top to bottom?

☐	☐	☐	☐	☐
>6 Tage	5-6 Tage	4-3 Tage	1-2 Tage	< 1 Tag

18. Wie häufig werden Feedbackgespräche zu Zielvereinbarungen geführt? How often do you have feedback as regards to the fulfillment of target agreements?

☐	☐	☐	☐	☐
alle 2 Jahre	jährlich	halb-jährlich	quartals-weise	monatlich

19. Gibt es in Ihrem Unternehmen Arbeitsplatzbeschreibungen? Do you have job discriptions?

☐	☐	☐	☐	☐
keine	wenige	viele	Auf fast allen Ebenen	Auf allen Ebenen

20. Wie häufig werden die Mitarbeiter über die wirtschaftlichen Kennzahlen des Unternehmens unterrichtet? How often are employees informed about the company's economic KPIs?

☐	☐	☐	☐	☐
jährlich	quartalsweise	monatlich	wöchentlich	täglich

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21. Über welche Kennzahlen werden die Mitarbeiter unterrichtet? Which KPIs are given to the employees?

Kenngrößen

- ☐ Finanzkennzahlen
- ☐ Produktivität
- ☐ Fluktuation
- ☐ Krankenstand
- ☐ Erfolgreich abgeschlossene Projekte
- ☐ Anzahl von Reklamatioen
- ☐ Ontime delivery
- ☐ Umsatz
- ☐ Kundenzufriedenheit

22. Wie ist die Anzahl der hierarchischen Ebenen von ‚TOP to Bottom'? What is the number of hierarchical levels from top to bottom?

☐	☐	☐	☐	☐
>10	10 -8	7-6	5-4	3-1

23. Gibt es einen etablierten Prozess in Ihrem Unternehmen, der es Mitarbeitern außerhalb der normalen Linie ermöglicht, Verletzungen ethischer Grundsätze aufzuzeigen? Is there a process in your company outside the normal line, which allows naming injuries of ethical principles? (Whistle blowing)

☐	☐	☐	☐	☐
Überhaupt nicht umgesetzt	selten	manchmal	häufig	Komplett umgesetzt

24. Werden diese Prozesse genutzt? Do people use this processes?

☐	☐	☐	☐	☐
Nie	Selten	Manchmal	Häufig	Immer

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EVALUATION OF BUSINESS EXCELLENCE ASPECTS

Nach welchem System arbeiten Sie? Which system do you have in place?

- TPM ☐
- TQM ☐
- Lean ☐
- Kaizen ☐
- Six Sigma ☐
- Operational Excellence ☐
- Business Excellence (EFQM) ☐
- Sonstiges / What else? ☐
- Wir haben keine System eingeführt / We don't have a system installed ☐

	Überhaupt nicht umgesetzt	1	2	3	4	5	Komplett umgesetzt
	☐	☐	☐	☐	☐	☐	
Strategie & Leitbild & Kennzahlen (Zielentfaltung)							
Die Visionen und die Strategie des Unternehmens sind klar formuliert / The vision and the strategy in your company are clearly phrased							
Die Mitarbeiter kennen die Vision, Mission, Strategie der Firma / The employees know the Vision, Mission and Strategy of the company							
Die Ziele und Messgrößen der einzelnen Abteilungen sind klar mit den Unternehmenszielen verknüpft / Goals and objectives of the single departments are clearly linked with the company targets							
Die Abteilungsleiter verstehen wie die Strategie gebildet wurde							
	Überhaupt nicht	☐	☐	☐	☐	☐	Komplett umgesetzt

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Management commitment & company culture

	umgesetzt				
	1	2	3	4	5
Die Mitarbeiter werden zur kontinuierlichen Verbesserung der Prozesse befähigt und bevollmächtigt					
Employees are empowered to continuously improve the process					
Das Management ist persönlich in Verbesserungsprozesse involviert					
Management is personally involved in improvement processes					
Probleme werden rückverfolgt, um die Ursachen zu erkennen und eine Fehlerwiederholung zu vermeiden					
Problems are always traced back to their origin to identify the root causes and prevent doing the same mistake twice					
Anweisungen und Kontrollen sind selten genutzt zugunsten einer offenen Kultur					
Command and control is seldom used in favor of an open culture					

Employee involvement & continuous improvement

Wir haben Methoden implementiert, um einen kontinuierlichen Verbesserungsprozess zu entfalten					
We have implemented tools and methods to deploy a continuous improvement process					
Unsere Mitarbeiter haben die Autorität, Probleme in dem Moment zu lösen, wenn sie auftreten					
Our employees have the authority to correct problems when they occur					
Wir bilden abteilungsübergreifende Teams, um Probleme zu lösen					
Cross functional teams are formed to solve problems					
Die Firma setzt akzeptierte Verbesserungsvorschläge konsequent um					

The company feels responsible for the implementation of suggestions for improvement					
Die Firma kümmert sich um ihre Mitarbeiter					
The company takes care of its employees					
Functional integration and qualification					
Jeder unsrer Mitarbeiter im Team ist funktionsübergreifend trainiert, so dass er bei Bedarf andere Mitarbeiter ersetzten kann					
Each of our employees within our work teams is cross-trained so that they can fill-in-for others when necessary					
Wir haben formale Programme zur Erhöhung der Flexibilität eingeführt, wie z.B. Job Rotation					
We have implemented formal programs to increase flexibility, e.g. by job rotation					
Unsere Firma hat regelmäßige Feedback Meetings installiert					
Our company has installed regular feedback meetings					
Die Informationen aus den Meetings werden systematisch für weiteres Training genutzt					
This information is systematically used for further training					

General

Performance Monitoring wird in übersichtlichen Bildern und Diagrammen dargestellt					
Performance charts monitor the performance of targets					

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Lean Audit Management Partner

APPENDIX 4 EMPIRICAL STUDY – EMPLOYEE QUESTIONNAIRE

Questionnaire / Fragebogen

VERTRAUEN / TRUST

1. Haben Sie regelmäßige Kontakte zu anderen Mitarbeitern im Unternehmen? Do you have regular contacts to other people in the company? TNO_1

Nie					Sehr häufig
☐	☐	☐	☐	☐	
1	2	3	4	5	

2. Kontaktieren Sie Ihre Kollegen nur, wenn Sie ein spezielles Anliegen haben? Do they contact you just in case you have a special issue? TNO_2

Sehr häufig					Selten
☐	☐	☐	☐	☐	
1	2	3	4	5	

3. Kontaktieren Sie Ihre Kollegen oder Ihr Team auch, um einfach nur in Kontakt zu bleiben, ohne dass ein konkreter Anlass vorliegt? Do you have contacts to your colleagues or team members just for staying in touch? TNO_3

Nie					Sehr häufig
☐	☐	☐	☐	☐	
1	2	3	4	5	

4. Wie intensiv ist die Zusammenarbeit zwischen den einzelnen Abteilungen oder Teams? How intensive ist the cooperation between departments or teams? TNO_4

Nur auf Anweisung					Selbstverständlich
☐	☐	☐	☐	☐	
1	2	3	4	5	

5. Haben Sie die Möglichkeit an Meetings teilzunehmen, die Ihre Arbeit betreffen? Do you have a chance to participate in meetings that touch your work? TNO_5

Nie					Sehr häufig
☐	☐	☐	☐	☐	
1	2	3	4	5	

6. Haben Sie das Gefühl, sozial akzeptiert zu sein? Do you have the feeling to be socially accepted? EOC_1

Überhaupt nicht					Sehr stark
☐	☐	☐	☐	☐	
1	2	3	4	5	

„Nichts kann den Menschen mehr stärken als das Vertrauen, das man ihm entgegenbringt"

„Nothing can strengthen more than the trust that is granted to somebody"
Paul Claudel (1868-1955)

The interview is embedded in the basic research question of the dissertation theme:
Does a culture of trust lead to higher ECU?

FRAGEBOGEN / QUESTIONNAIRE
Die Daten werden vertraulich behandelt / The information is taken confidential

- **Date/Datum- Location/Ort:**   00.03.2014, Beispiel

- **Age/Alter:**   <= 35 ☐   36-40 ☐   41-50 ☐   51-60 ☐   >= 60 ☐

- **Gender/Geschlecht:**   Male/männlich ☐   Female/weiblich ☐

Der Fragebogen ist so konzipiert, dass alle Fragen auf einer Skala von 1-5 zu beantworten sind. Die Gesamtdauer beträgt ca. 30 Minuten. Bitte beantworten Sie die Fragen in einem Durchgang.

The questionnaire can be filled in on a scale of 1-5. The duration is about 30 minutes. Please answer to the questions in one cycle.

Vielen Dank für Ihre Mitarbeit!
Thank you very much for dedicating your time to this survey!

Britta Bolzern-Konrad

☐	☐	☐	☐	☐
< 1 Tag	1-2 Tage	3-4 Tage	5-6 Tage	>6 Tage

12. Ist die Kommunikation in Ihrer Firma offen, nachvollziehbar und bindend? Is the communication open and stringent and binding (stringent) TNC_2

Trifft überhaupt nicht zu   ☐   ☐   ☐   ☐   ☐   Trifft immer zu
   1   2   3   4   5

13. Haben Sie in Ihrer Firma ernst zu nehmende persönliche Gespräche, die Sie in die Lage versetzten zu verstehen, warum und wie Entscheidungen getroffen worden sind? Do you have high-quality face to face communication in your company in which you understand how and why decisions and choices have been made? TCA_2

Trifft überhaupt nicht zu   ☐   ☐   ☐   ☐   ☐   Trifft völlig zu
   1   2   3   4   5

14. Können Sie mit Beschwerden oder anderen Anliegen zu Ihrem Chef kommen? Are the employees allowed to contact management with dis- concern or other important issues? TNC_4

Nie   ☐   ☐   ☐   ☐   ☐   Immer
   1   2   3   4   5

15. Sind die Türen zu Ihren Vorgesetzen für jeden geöffnet? Are the doors to the senior managers open for everybody? TNC_5

Trifft überhaupt nicht zu   ☐   ☐   ☐   ☐   ☐   Trifft völlig zu
   1   2   3   4   5

16. Machen Sie häufig Gebrauch davon, d.h. nutzen die Sie die „offene Tür"? Do the employees use this opportunity frequently? (door open) TNC_6

Nie   ☐   ☐   ☐   ☐   ☐   Sehr häufig
   1   2   3   4   5

17. Haben Sie ausreichend Informationen, um eine Entscheidung zu treffen? Do you have enough Information to make a decision? TNI_1

Trifft überhaupt nicht zu   ☐   ☐   ☐   ☐   ☐   Trifft völlig zu
   (1   2   3   4   5   )

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7. Finden in Ihrem Unternehmen gemeinsame Aktionen statt – wie z.B. gemeinsames Abendessen, Ausflüge oder Veranstaltungen? Do you have common events in your company - like common dinner, trips or events? TNO_6

Überhaupt nicht   ☐   ☐   ☐   ☐   ☐   Sehr häufig
   1   2   3   4   5

8. Wie würden Sie die Zusammenarbeit der unterschiedlichen Beschäftigungsgruppen beschreiben? How would you describe the cooperation between different employee groups?

	Sehr schlecht	-			Sehr gut
	1	2	3	4	5
Die Zusammenarbeit.../ the cooperation	☐	☐	☐	☐	☐
Zwischen jüngeren und älteren Beschäftigten ist.../ between younger and older employees is...TNO_7	☐	☐	☐	☐	☐
Zwischen Leitungspersonal und Personal ohne Leitungsfunktion ist.../ between leaders and followers is...TNO_8	☐	☐	☐	☐	☐
Zwischen Frauen und Männern ist.../ between women and men is...TNO_9	☐	☐	☐	☐	☐
Zwischen Akademikern und Nicht-Akademikern ist.../between academics and non-academics is...TNO_10	☐	☐	☐	☐	☐
Zwischen Produktion und Verwaltung ist.../ between production and administration is...	☐	☐	☐	☐	☐
Zwischen Forschung und Entwicklung und Produktion ist.../ between research&development and production is...TNO_11	☐	☐	☐	☐	☐

9. Gibt es Ihrer Einschätzung nach in Ihrer Firma mehr Gerüchte als üblich? What do you think, are there more rumors than usual? TNC_1

Trifft überhaupt nicht zu   ☐   ☐   ☐   ☐   ☐   Trifft völlig zu
   1   2   3   4   5

10. Wie würden sie den Umgangston in Ihrem Unternehmen beschreiben? How would you describe the ‚conversation sound' / the casual conversation within your company? TFR_1

Sehr formell   ☐   ☐   ☐   ☐   ☐   Sehr locker
   1   2   3   4   5

11. Wie schnell sind wichtige Informationen über grundsätzliche Entscheidungen bei Ihnen vor Ort? How fast are important informations on general decisions on your desk? TNC_3

18. **Wie ist die Anzahl der hierarchischen Ebenen oberhalb Ihrer Position im Unternehmen?** How is the number of hierarchical levels above your position within the company? TNC_7

>10	10-8	7-6	5-4	3-1
❏	❏	❏	❏	❏

19. **Welchen Stellenwert hat in Ihrem Unternehmen die Selbstabstimmung im Team (ohne Außeneinwirkung)?** Which weight or significance does have self-determination in teams? TDD_1

Niedrig ❏1 ❏2 ❏3 ❏4 ❏5 Hoch

20. **Überwiegt die Fremd- oder Selbstkontrolle in Ihrem Unternehmen?** Does the external control outbalance the internal control? TDD_2

Niedrig ❏1 ❏2 ❏3 ❏4 ❏5 Hoch

21. **In wie weit können Sie frei über die Lösung der gestellten Aufgabe entscheiden?** How is the degree of freedom to make a decision? TDD_3

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft zu

22. **Welche Bedeutung haben Improvisation und Flexibilität für die Aufrechterhaltung der Arbeitsabläufe?** How is the importance of improvisation and flexibility as regards to the continuance of working procedures? TDE_1

Sehr gering ❏1 ❏2 ❏3 ❏4 ❏5 Sehr hoch

23. **Geben Sie eine Rückmeldung an Ihren Vorgesetzten wenn Ihre Aufgabe erledigt ist?** Do you give a feedback to your supervisor after fulfilling the task? TDE_2

Nie ❏1 ❏2 ❏3 ❏4 ❏5 Immer

24. **Fühlen Sie sich kontrolliert durch diese Rückmeldung?** Do you feel controlled by this feedback? TDE_3

Negative Kontrolle ❏1 ❏2 ❏3 ❏4 ❏5 Positive Kontrolle

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25. **Sehen Sie diese Rückmeldung als Zeichen der Anerkennung durch Ihren Chef?** Do you receive this feedback as a sign of attention/interest in you? TDE_4

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

26. **Tendiert Ihr Unternehmen eher zur Führung durch Kontrolle oder zur Führung durch Honorierung (muss nicht finanziell sein)?** Does your company tend more to control or more to reward? TDE_5

Ehr Kontrolle ❏1 ❏2 ❏3 ❏4 ❏5 Ehr Honorierung

27. **Findet in den Teams ein gleichberechtigtes wechselseitiges Abstimmen statt?** Do you see equal mutual reconciliation within teams? TDA_1

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

28. **Haben Sie das Gefühl einen gerechten Anteil am Erfolg der Firma zu bekommen?** Do you think you have a share on the success of the company? TFJ_2

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

29. **Haben Sie den Eindruck dass in Ihrem Unternehmen eine gerechte Leistungsbewertung erfolgt?** Do you thnk that in your organization performance is dealt justly? TFJ_1

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

30. **Wenn Ergebnisse nicht geliefert werden, sind die Reaktionen echt, also nicht gefälscht oder erschwindelt?** If results are not delivered are messages real, not fake, or fudged? TFA_2

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

31. **Haben Sie den Eindruck, dass Ihre Arbeitsatmosphäre von Aufrichtigkeit gekennzeichnet ist?** Do you have the feeling that the working atmosphere is characterized by frankness/fair mildness? TFA_3

Trifft überhaupt nicht zu ❏1 ❏2 ❏3 ❏4 ❏5 Trifft immer zu

202

39. Haben Sie das Gefühl, dass in Ihrem Unternehmen offen mit Fehlern umgegangen wird? Do you have the impression that in your company people are able to admit a failure? TFF_1

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

40. Würden Sie sich selber sicher fühlen, einen Fehler zugeben? Do you feel safe to admit a failure? TFF_2

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

41. Wird jeder wie ein gleichberechtigter Partner behandelt, Mitarbeiter ohne Kundenkontakt, Hausmeister, Lieferanten und Verkäufer? Is everyone treated as an equal partner, including people in the back office, janitors, suppliers and vendor? TFR_2

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

42. Bestätigt Ihr Eindruck der Firmenkultur, dass Ihre wichtigsten Belange wirklich ernst genommen werden? Does your impression of the company culture make you believe that your best interest is taken at heart? TFC_2

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

43. Stimmt der Satz: „Ich vertraue darauf, dass mein Chef die richtige Entscheidung trifft"? Is this sentence true: I trust that my boss is going to make the right decision? TFC_1

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

44. Sind Sie davon überzeugt, dass Ihr Vorgesetzter weiß, dass Sie die Ihnen gestellte Aufgabe in der bestmöglichen Art und Weise lösen werden? Are you confident that your supervisor knows that you will solve your task in the best possible way? TFR_3

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

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32. Sind Worte und Handlungen überall und immer konsistent? Are words and deeds consistent everywhere? TFA_4

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

33. Sind Entscheidungen in Ihrem Unternehmen nachvollziehbar und nicht willkürlich? Are decisions in your company traceable and not arbitrarily? TFA_5

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

34. Gibt es nachvollziehbare, klare Gründe warum Entscheidungen gefällt werden? Are there clear reasons why things happen? TFA_6

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

35. Machen Menschen in Ihrer Organisation, was sie versprechen? Do people do what they commit? TFA_7

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

36. Wenn Sie Ihre Ziele nicht erreichen, gehen Sie dann offen damit um ohne zu verfälschen und bevor Sie gegen die Wand laufen? If you don't meet your expectations, do you tell people honestly without fudging the issue before you hit the buffers? TFA_8

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

37. Sind vertrauliche Informationen sicher in Ihrem Unternehmen? Are confident informations secure in your company? TFA_9

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

38. Vertrauen Sie darauf, dass die eigene Verletzbarkeit nicht ausgenutzt wird? Do you belief that the own vulnerability will not be capitalized (ausnutzen) TFA_10

Trifft überhaupt nicht zu					Trifft immer zu
1	2	3	4	5	

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51. Gibt es in Ihrem Unternehmen Arbeitsplatzbeschreibungen? Do you have job discriptions? TCV_2

keine	wenige	viele	Auf fast allen Ebenen	Auf allen Ebenen
☐	☐	☐	☐	☐

52. Wie schätzen Sie das Verhältnis von formellen Aufgabenbeschreibungen und informellen Arbeitsroutinen ein? How do you estimate the relation between formal job-descriptions and informal working routines? TCV_3

Stark formal					Stark informell
☐	☐	☐	☐	☐	
1	2	3	4	5	

53. Wie häufig werden Sie über die wirtschaftlichen Kennzahlen des Unternehmens unterrichtet? How often are you informed about the company's economic KPIs? TCV_4

jährlich	Quartals-weise	monatlich	wöchentlich	täglich
☐	☐	☐	☐	☐

54. Welche Kennzahlen erfahren Sie regelmäßig? Which KPIs do you get on a regular basis?

Kenngrößen	
Finanzkennzahlen	☐
Produktivität	☐
Fluktuation	☐
Krankenstand	☐
Erfolgreich abgeschlossene Projekte	☐
Anzahl von Reklamatioen	☐
Ontime delivery	☐
Umsatz	☐
Kundenzufriedenheit	☐

55. Gibt es klare Signale darüber, was in Ihrem Unternehmen akzeptiert ist und was nicht (Spielregeln)? Are there clear and consistent signals about what is and isn't acceptable in the organization (rules of the game)? TCS_1

Trifft überhaupt nicht zu					Trifft völlig zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

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45. Haben Sie eine grundsätzlich positive Erwartungshaltung gegenüber ihrer Umgebung? Do you have general positive expectation with respect to your work environment? TFR_4

Trifft überhaupt nicht zu					Trifft immer zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

46. Wie hoch ist die Arbeitsplatzsicherheit in Ihrem Unternehmen? Wieviel % der Belegschaft haben in den vergangenen 3 Jahren eine Kündigung erhalten? How high is the job security in your company? How many layoffs did you have in average in the last 3 years? TFA_15

>10 %	10-8 %	7-5%	4-2%	0%
☐	☐	☐	☐	☐

47. Bestätigt Ihre Arbeitsumgebung, dass die sie umgebenden Menschen integer sind (Anstand haben)? Do you have the impression that your working environment has integrity? TFC_6

Trifft überhaupt nicht zu					Trifft immer zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

48. Gibt es einen etablierten Prozess in Ihrem Unternehmen, der es Mitarbeitern außerhalb der normalen Linie ermöglicht, Verletzungen ethischer Grundsätze aufzuzeigen? Is there a process in your company outside the normal line, which allows naming inquiries of ethical principles (Whistle blowing)? TFA_11

Überhaupt nicht umgesetzt	selten	manchmal	häufig	Komplett umgesetzt
☐	☐	☐	☐	☐

49. Haben Sie das Gefühl, dass konstruktive Kritik ernst genommen wird? Do you have the feeling that positive critics are taken seriously? TFA_12

Trifft überhaupt nicht zu					Trifft immer zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

50. Wissen Sie genau, was von Ihnen erwartet wird? Do you know what is expected from you at work? TCV_1

Trifft überhaupt nicht zu					Trifft voll zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

KOMPETENZ NUTZUNG / ECU

1 **Seit wie viele Jahre sind Sie bereits in Ihrer Firma?**
Since how many years do you work for this company? ERA_1

< 1 year	1 – 3 years	4 - 6 years	7 – 10 years	10 years
☐	☐	☐	☐	☐

2 **Wieviel Prozent Ihrer Projekte schließen Sie erfolgreich ab?** What is the number of projects you finalize successfully? EPP_1

< 10 %	10-30%	31-50%	51-70%	>70%
☐	☐	☐	☐	☐

3 **Haben Sie das Gefühl, das immer auch ein Lerneffekt eintritt, wenn Sie eine schwierige Aufgabe gelöst haben?** Do you have the impression that you learn whenever you solve a difficult task? EPP_2

Trifft überhaupt nicht zu	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Trifft völlig zu

4 **Kennen Sie Ihre Stärken und Schwächen?** Are you aware of your strength and weaknesses? EPP_3

Trifft überhaupt nicht zu	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Trifft völlig zu

5 **Wieviel Verbesserungsvorschläge machen Sie im Jahr durchschnittlich?** What is the number of improvement proposals you make on average in one year? EPP_4

< 0,5	0,6 - 1	1,1-1,5	1,6-2	>2
☐	☐	☐	☐	☐

6 **Wie hoch ist die Anzahl an Patenten an denen Sie beteiligt sind durchschnittlich im Jahr?** How high is the number of patent applications you are involved in average per year? EPP_5

< 1	1-2	3-4	5-6	>6
☐	☐	☐	☐	☐

7 **An wie vielen Projekten zur kontinuierlichen Verbesserung nehmen Sie teil?** On how many projects for continuous improvement do you participate? EPP_6

< 1	1-2	3-4	5-6	>6
☐	☐	☐	☐	☐

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56. **Macht Ihr Chef mit Ihnen regelmäßig Zielvereinbarungen?** Does your boss make target agreements with you (Zielvereinbarungen)? TCA_1

Trifft überhaupt nicht zu	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Trifft immer zu

57. **Wie häufig werden Feedbackgespräche zu Zielvereinbarungen geführt?** How often do you have feedback as regards to the fulfillment of target agreements? TCA_3

alle 2 Jahre	jährlich	halb-jährlich	quartals-weise	monatlich
☐	☐	☐	☐	☐

58. **Kennen Sie das Leitbild und die Unternehmenswerte?** Do you know the company values? TCV_14

Trifft überhaupt nicht zu	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Trifft völlig zu

59. **Sind Entscheidungen über die Zuteilung von Ressourcen klar, nachvollziehbar und berücksichtigen die Rahmenbedingungen?** Are decisions on resources clear, understandable and appreciate the circumstances? TCC_1

Trifft überhaupt nicht zu	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	Trifft immer zu

8 An der Einführung von wie vielen neuen Prozessen sind Sie durchschnittlich im Jahr beteiligt? On how many new process implementations do you participate in average per year? EPP_7

< 1	1-2	3-4	5-6	>6
☐	☐	☐	☐	☐

9 Würden Sie Ihr Unternehmen als innovativ bezeichnen? Would you name your company innovative? EOE_1

Trifft überhaupt nicht zu					Trifft völlig zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

10 Haben Sie alle Materialien und Hilfsmittel, die Sie benötigen, um Ihre Arbeit richtig zu tun? Do you have materials and equipment you need to do your work right? TCC_2

Trifft überhaupt nicht zu					Trifft immer zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

11 Haben Sie bei der Arbeit die Möglichkeit das was Sie tun jeden Tag bestmöglich zu tun? At work do you have the opportunity to do what you do best every day? EOE_15

Trifft überhaupt nicht zu					Trifft völlig zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

12 Wie hoch ist der Anteil von internen zu externen Besetzungen von Managementpositionen? What is the share of internal versus external recruitments for management positions? ESG_1

< 10 %	>10 < 30 %	>30 < 50%	>50 < 70 %	>70%
☐	☐	☐	☐	☐

13 Werden Sie als Projektmanager von Ihrem Unternehmen eingesetzt? Are you chosen for project management by your company? EOE_2

nie	selten	manchmal	Häufig	immer
☐	☐	☐	☐	☐

14 Wie hoch ist der durchschnittliche Grad der Erfüllung Ihrer Zielvereinbarungen? How high is the average level of fulfillment in target agreements? EOE_3

<50%	51-60 %	61-70%	71-80%	>80 %
☐	☐	☐	☐	☐

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15 Hatten Sie schon mal einen Zielerfüllungsgrad von mehr als 100%? Did you have a target fulfillment level of more than 100%? EOE_4

< 1	1	2	3	>3
☐	☐	☐	☐	☐

16 Wie gehen Sie mit Zeitdruck um? How do you handle time pressure? EOE_5

Hoher Widerstand					Hoher Einsatz
☐	☐	☐	☐	☐	
1	2	3	4	5	

17 Machen Sie Ihre Arbeit, weil Sie Spaß daran haben? Are you doing your work because you have fun to do so? EOE_7

Trifft überhaupt nicht zu					Trifft völlig zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

18 Erledigen Sie Aufgaben mit Begeisterung? Are you doing your work with enthusiasm? EOE_8

Trifft überhaupt nicht zu					Trifft völlig zu
☐	☐	☐	☐	☐	
1	2	3	4	5	

19 Wie wichtig ist Ihnen Wertschätzung durch Bezahlung? How important is recognition through gratification? EOE_9

Gar nicht wichtig					Sehr wichtig
☐	☐	☐	☐	☐	
1	2	3	4	5	

20 Wie wichtig ist Ihnen Wertschätzung in Form von positivem Feedback? How important is recognition in form of positive feedback? EOE_10

Gar nicht wichtig					Sehr wichtig
☐	☐	☐	☐	☐	
1	2	3	4	5	

21 Wie wichtig ist Ihnen, dass Sie Spaß an Ihrer Arbeit haben? How important is happiness at work for you? EOE_11

Gar nicht wichtig					Sehr wichtig
☐	☐	☐	☐	☐	
1	2	3	4	5	

22 Wenn Sie Spaß an Ihrer Arbeit haben, hat das zu tun …
mit dem den interessanten Aufgaben in Ihrem Job….
In case you have fun to do your job are you influenced by…
the content of the job? EOE_12

23 ...mit der Atmosphäre in Ihrem Unternehmen? /... by the atmosphere of your company? EOE_13

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

24 ---mit der Wichtigkeit Ihrer Aufgaben? ...by the meaningfulness of your task? EOE_14

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

25 Identifizieren Sie sich mit Ihrem Unternehmen? Do you feel emotional attachment (involved) to the organization? EOC_2

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

26 Fühlen Sie sich sicher bezüglich Ihrer eigenen Fähigkeiten? Do you feel safe regarding to your own ability? EOC_3

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

27 Sind Sie stolz darauf in diesem speziellen Unternehmen zu arbeiten? Are your proud to work in your specific company? EOC_4

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

28 Haben Sie das Gefühl, Teil einer erfolgreichen Firma zu sein? Do you think you are part of a successful enterprise? EOC_5

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

29 Haben Sie ein 'Wir' Gefühl in ihrer Firma? Do you have a 'we'-feeling about your company? EOC_6

| Gar nicht | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Absolut |

30 Haben Sie das Gefühl, dass Ihr Job wichtig ist? Do feel that your job is important? EOC_11

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

31 Haben Sie das Gefühl in bedeutsame Aufgaben eingebunden zu sein? Do you have the feeling of being involved in important tasks? ESM_1

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

32 Haben Sie den Eindruck, dass Ihre Meinung zählt in Ihrer Firma? At work do your opinion seems to count? EOC_8

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

33 Ist es für Ihre Kollegen selbstverständlich einem qualitativen guten Job zu machen? Are your associates (fellow employees) committed to doing quality at work? EOC_9

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

34 Haben Sie einen guten Freund bei der Arbeit? Do you have food friend at work? EOC_10

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

35 Haben Sie das Gefühl, dass sich Ihr Unternehmen um Sie als Person kümmert? Does your supervisor, or someone at work, seem to care about you as a person? TFC_3

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

36 Ruft die Mission und das Leitbild der Firma das Gefühl in Ihnen hervor, dass Ihr Job wichtig ist? Do the mission / purpose of your company make you feel your job is important? EOC_7

| Trifft überhaupt nicht zu | ☐ 1 | ☐ 2 | ☐ 3 | ☐ 4 | ☐ 5 | Trifft völlig zu |

balance your needs perpetual or again and again? (Like stability/flexibility or closeness/distance....) ESI 2

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft völlig zu
	☐	☐	☐	☐	☐	

44 Wie beurteilen Sie in der Praxis das Thema Vertrauen und verantwortliches Handeln in Ihrem Unternehmen? How do you evaluate in praxis the issue of trust and responsible action?

	Sehr klein		-		Sehr groß
	1	2	3	4	5
Das Vertrauen der Beschäftigten in die Geschäftsführung ist.../ Trust of employees in management is....T_1	☐	☐	☐	☐	☐
Die Gemeinsamkeiten zwischen Zielen der Geschäftsführung und der Beschäftigten sind.../ commonalities between management and employee goals are....TCS_2	☐	☐	☐	☐	☐
Das Verständnis der Maßnahmen der Geschäftsführung ist.../ the understanding of management decisions is.... TCV_15	☐	☐	☐	☐	☐
Das Einbeziehen der Beschäftigten in Entscheidungsprozesse ist.../ the involvement of employees to the decison making process is...see 44	☐	☐	☐	☐	☐
Der Anteil der Fehler, für die Beschäftigte haftbar gemacht werden, ist.../ The share of failures employees are hold liable is....TFF_3	☐	☐	☐	☐	☐
Zu erfahren, welche Fehler passieren ist.../ to be informed about failures is....TFF_5	☐	☐	☐	☐	☐
Der Anteil der Fehler, von denen die Geschäftsführung Kenntnis erlangt ist.../ the share of failures management comes to know is....TFF_4	☐	☐	☐	☐	☐

45 Inwieweit entspricht die alltägliche Praxis in Ihrem Unternehmen folgenden Aussagen zum Thema transparente Führung und Mitarbeiterbeteiligung? In how far does the daily practice correspond to the following topics of leadership and employee involvement?

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37 Wie viele Tage sind Sie durchschnittlich krank im Jahr? How many days are you in average ill per year? EOE_6

>8	6-7	4-5	1-3	<1
☐	☐	☐	☐	☐

38 Haben Sie in den letzten 7 Tagen Anerkennung oder Lob für gute Arbeit bekommen? In the last seven days, have you received recognition or praise for doing good work? ESI 3

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft immer zu
	☐	☐	☐	☐	☐	

39 Wie häufig werden in Ihrem Unternehmen Mitarbeiterbefragungen durchgeführt? How often do you execute employee satisfaction survreys? ESM_2

Mehr als 10 Jahre	Alle 10-8 Jahre	Alle 7-5 Jahr	Alle 4-2 Jahre	Jedes Jahr
☐	☐	☐	☐	☐

40 Hat in den letzten 6 Monaten jemand mit Ihnen über Ihren Fortschritt gesprochen? In the last 6 month has some one at work talked to you about your progress? ESG_6

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft immer zu
	☐	☐	☐	☐	☐	

41 Hatten Sie im letzten Jahr Möglichkeiten bei der Arbeit zu lernen und zu wachsen? In the last year, have you had opportunities at work to learn and grow? ESG 2

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft immer zu
	☐	☐	☐	☐	☐	

42 Finden Sie, dass Sie in Ihrem Unternehmen in Ihrer persönlichen Weiterentwicklung unterstützt werden? Is there someone at work who encourages your development? ESG 3

Trifft überhaupt nicht zu	1	2	3	4	5	Trifft völlig zu
	☐	☐	☐	☐	☐	

43 Haben Sie das Gefühl, dass Ihre Umgebung ein Gefühl der Ausgeglichenheit Ihrer Bedürfnisse erlaubt? (z.B. Sicherheit/Flexibilität oder Nähe/Distanz...) Do you have the feeling that you the environment you work in allows you to

	Trifft gar nicht zu				Trifft voll zu
	1	2	3	4	5
Beschäftigten ist… / The recognition of positive employee performance is…ESI_4	☐	☐	☐	☐	☐
Dass Beschäftigte für Fehler zur Verantwortung gezogen werden ist …/ that employees are called to account for failures is…TFF_6	☐	☐	☐	☐	☐
Freiräume für Kreativität und Lernschleifen (z.B. Team Runden) sind …/ tolerance for creativity and learning loops (team meetings…) is…TDE_6	☐	☐	☐	☐	☐
Die Zusagen einzuhalten, die den Beschäftigten gemacht werden, ist …/ to comply with promise given to employees is TFA_16	☐	☐	☐	☐	☐

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	Trifft gar nicht zu				Trifft voll zu
	1	2	3	4	5
Im Unternehmen herrscht Lohntransparenz / salary is transparent within the company…TCV_20	☐	☐	☐	☐	☐
Das Management stellt sich regelmäßig der Bewertung durch die Beschäftigten (z.B. anonyme Mitarbeiterbefragungen) / Management is regularly evaluated by employees…ESM_3	☐	☐	☐	☐	☐
Bei wichtigen Entscheidungen werden die Beschäftigten regelmäßig am Entscheidungsprozess beteiligt / employees are involved regularly for important decisions…TDA_2	☐	☐	☐	☐	☐
Mit jedem Mitarbeiter/Mitarbeiterin wird gemeinsam ein Qualifizierungsplan (Fort-und Weiterbildung) entwickelt / Together with each employee a qualification plan is developed ESG_4	☐	☐	☐	☐	☐

46 Wie bewerten Sie folgende Aussagen über den Führungsstil in Ihrem Unternehmen? How do you evaluate the following statements on leadership in your organization?

	Sehr unwichtig				Sehr wichtig
	1	2	3	4	5
Das Vertrauen der Beschäftigten zu erhalten ist/ to keep employee's trust is ….. T_2	☐	☐	☐	☐	☐
Auf ein ausgewogenes Verhältnis zwischen Leistungserwartung und Vergütung zu achten ist …/ to take care on a balanced ratio of achievement and salary is…ESI_1	☐	☐	☐	☐	☐
Wichtige Entscheidungen im ganzen Unternehmen transparent zu machen ist …/ to communicate important decisions to the entire staff is….. TNC_8	☐	☐	☐	☐	☐
Das Einbeziehen der Beschäftigten in Entscheidungsprozesse ist …TDA_3	☐	☐	☐	☐	☐
Teamorientiertes Führungsverhalten ist …/ team oriented leadership behavior is…TDA_4	☐	☐	☐	☐	☐
Zu erfahren, welche Fehler passieren, ist …/ to be informed on the kind of failures is…. see 44, TFF_5	☐	☐	☐	☐	☐
Die Anerkennung positiver Leistung der	☐	☐	☐	☐	☐

EVALUATION OF BUSINESS EXCELLENCE ASPECTS

	Überhaupt nicht umgesetzt				Komplett umgesetzt
	1	2	3	4	5

Strategie & Leitbild & Kennzahlen (Zielentfaltung)

	1	2	3	4	5
Die Visionen und die Strategie des Unternehmens sind klar formuliert / The vision and the strategy in your company are clearly phrased TCV 18	☐	☐	☐	☐	☐
Die Mitarbeiter kennen die Vision, Mission, Strategie der Firma / The employees know the Vision, Mission and Strategy of the company TCV 13					
Die Ziele und Messgrößen der einzelnen Abteilungen sind klar mit den Unternehmenszielen verknüpft / Goals and objectives of the single departments are clearly linked with the company targets TCV 16					
Die Abteilungsleiter verstehen wie die Strategie gebildet wurde / Department heads understand how strategy is build TCV_17					

Management commitment & company culture

	Überhaupt nicht umgesetzt				Komplett umgesetzt
	1	2	3	4	5
Die Mitarbeiter werden zur kontinuierlichen Verbesserung der Prozesse befähigt und bevollmächtigt / Employees are empowered to continuously improve the process TDE 11	☐	☐	☐	☐	☐
Das Management ist persönlich in Verbesserungsprozesse involviert / Management is personally involved in improvement processes TFA_18					
Probleme werden rückverfolgt, um die Ursachen zu erkennen und eine Fehlerwiederholung zu vermeiden / Problems are always traced back to their origin to identify the root causes and prevent doing the same mistake twice TFF_7					
Anweisungen und Kontrollen sind selten genutzt zugunsten einer offenen Kultur / Command and control is seldom used in favor of an open culture TDD 4					

Employee involvement & continuous improvement

	1	2	3	4	5
Wir haben Methoden implementiert, um einen kontinuierlichen Verbesserungsprozess zu entfalten / We have implemented tools and methods to deploy a continuous improvement process TDE 10					
Unsere Mitarbeiter haben die Autorität, Probleme in dem Moment zu lösen, wenn sie auftreten / Our employees have the authority to correct problems when they occur TDE 8					
Wir bilden abteilungsübergreifende Teams, um Probleme zu lösen / Cross functional teams are formed to solve problems TNO 13					
Die Firma setzt akzeptierte Verbesserungsvorschläge konsequent um / The company feels responsible for the implementation of suggestions for improvement TFA 17					
Die Firma kümmert sich um ihre Mitarbeiter / The company takes care of its employees TFC 4					
Jeder unsrer Mitarbeiter im Team ist funktionsübergreifend trainiert, so dass er bei Bedarf andere Mitarbeiter ersetzten kann					

210

Und zum Abschluss/finally:

Welche der folgenden Werte verbinden Sie mit Ihrem Unternehmen?
Which of the following values do you relate to your company?

WERTE	
Qualität / Quality	☐
Innovation / Innovation	☐
Verantwortung / Responsibility	☐
Kompetenz / Competence	☐
Leistungsbereitschaft / Willingness to perform	☐
Integrität / Integrity	☐
Teamgeist / Team spirit	☐
Offenheit / openeness	☐
Respekt / Respect	☐
Aufrichtigkeit / Honesty, frankness	☐
Fairness / Fair mindset	☐
Vertrauen / Trust	☐
Lernbereitschaft / Willingness to learn	☐
Konfliktfähigkeit / Problem solving ability	☐
Andere / Others.............. ...(bitte tragen Sie den Bereich ein	☐

In welchem Bereich sind Sie tätig? In which field do you work?
Bitte kreuzen Sie an: Please mark with a cross

Bereich	
Verkauf/Sales	☐
Einkauf/Purchasing	☐
Produktion/Production	☐
Entwicklung/Development	☐
Arbeitsvorbereitung/Planning Department	☐
Qualitätskontrolle/Quality Assurance	☐
Anderer Bereich / Other Departements... ...(bitte tragen Sie den Bereich ein	☐

Each of our employees within our work teams is cross-trained so that they can fill-in-for others when necessary TDE_9					
Wir haben formale Programme zur Erhöhung der Flexibilität eingeführt, wie z.B. Job Rotation					
We have implemented formal programs to increase flexibility, e.g. by job rotation TDE_7					
Unsere Firma hat regelmäßige Feedback Meetings installiert					
Our company has installed regular feedback meetings TCA_4					
Die Informationen aus den Meetings werden systematisch für weiteres Training genutzt					
Information from feedback meetings is systematically used for further training ESG_5					
General					
Performance Monitoring wird in übersichtlichen Bildern und Diagrammen dargestellt					
Performance charts monitor the performance of targets TCV_19					

Haben Sie Anmerkungen? Do you have comments?

Ganz herzlichen Dank für Ihre Unterstützung! Thank you very much for your help!

Contact: Britta Bolzern-Konrad, Email: mail@bbolzern.de, 08034 7058850

APPENDIX 5 EMPIRICAL STUDY WITH EMPLOYEES - TEST ON NORMAL DISTRIBUTION

Calculate Shapiro-Wilk Statistic W

Result:
Mean:
4.492

Standard Deviation:
0.770

Variance:
0.592

Kurtosis:
1.849

Calculated Shapiro-Wilk statistic W:
0.679466

Calculated Shapiro-Wilk p-value:
-0.027234

Critical value of W (5% significance level):
0.947

Clear Result

Reject Null Hypothesis as calculated W is less than the critical value of W.

Source: empirical results employee study

APPENDIX 6 EMPIRICAL STUDY WITH EMPLOYEES - DETAILED STATISTICAL NUMBERS

Table: Summary on correlation results – employee survey - details

Hypothesis / Proposition	Results r = correlation coefficient and r² = coefficient of determination	Trust	Employee competence utilization
H$_B$: The higher the level of (perceived) trust, the higher the level of employee competence utilization	The correlation between trust and employee competence utilization is positive, significant and of medium strength: **r = 0,455**** This analysis can be interpreted in saying that variance in trust have an impact of 20% on variances in employee competence utilization: r² is 0,202**		**YES, based on the underlying model and defined scope:** r = 0,455**
This level is acceptable for social sciences. Trust is not the only impact factor on employee competence utilization but builds a decisive basis. And, if trust is not existent, it can be expected that also all other factors are negatively impacted. General causality is supported by theory.			
P$_B$1: The higher the evaluation of personal characteristics, the higher the level of employee competence utilization	Personal characteristics are described as the basic predisposition towards another party and by the perceived trustworthiness towards the respective trustee:		
P$_B$1.1: **The higher the personal predisposition for trust, the higher the level of trust**	The correlation between trustor's predisposition and his trust level is positive, significant and of medium strength: **r = 0,44**** The coefficient of determination is: r²=0.194**	**YES:** r = 0,44**	
P$_B$1.2: **The higher the personal predisposition for trust, the higher the level of employee competence utilization**	The correlation between the trustor's predisposition and employee competence utilization is positive, significant and of low strength: **r = 0,244****, The coefficient of determination is: r² = 0,060**		**Maybe:** r = 0,244** supported by theory

P$_B$1.3: **The higher the evaluation of the personal characteristics (trustworthiness) of the trustee by the trustor, the higher the level of employee competence utilization**	The correlation between trustworthiness and trust is positive, significant and high: **r = 0,675****, r²= 0.456 **benevolence** (0,549/0,30)** > ability (0,511/0,26)** > predictability (0,484/0,23)** > integrity (0,437/0,19)** to trust, all being significant and of medium strength. Correlation between trustworthiness and employee competence utilization is positive, significant but low: **r = 0,265****, r² = 0,070** **benevolence** (0,321/0,10)** > predictability (0,261/0,07)** > integrity (0,179/0,03)* > ability (0,081/0,007) to employee competence utilization, not all being significant	**YES:** r = 0,675**	**Maybe:** r = 0,265** supported by theory
The correlation between the trustor's predisposition to trust and trust is positive, significant and of medium strength. Theory supports that the predisposition to trust is a condition for trust development and that trustworthiness is an important part of the trust concept, Also in line with theory, benevolence ranks highest compared accountability, integrity and ability. The correlation between trustworthiness and employee competence utilization is positive, significant, but low. This underlines the assumption that personal characteristics are of importance but they are not the only impact factor for employee competence utilization. However, although being based on a low correlation, theory suggests that missing benevolence has the power to destroy the whole concept. Therefore its basic importance cannot be neglected although based on low correlation strength.			
P$_B$2: **The higher the evaluation of relational characteristics, the higher the level of employee competence utilization**	Relationship elements are positive and significantly related to employee competence utilization on a level of **r = 0,450****. The coefficient of determination is: r² = 0,203** 'Do you know what is expected from you?' ranks highest		**Yes** r = 0,450**
In general theory supports that network structures are a basic element of social capital. The correlation of relational characteristics and employee competence utilization is positive, significant and of medium strength. These findings underline the assumption that relations in form of experienced behavior are an important part of the trust concept; especially as relational trust is seen to be the most powerful form of trust.			

P$_B$3: The higher the evaluation of situational/contextual factors, the higher the level of employee competence utilization	Contextual elements are positively and significantly related to employee competence utilization, but on a low level of **r = 0,196**** The coefficient of determination is: r² = 0,038**		**Maybe** r = 0,196** supported by theory

The focus is put on the question, if the allowance for self-directed action is given. This element, seen to be representative for the situational context, is positively and significantly correlated to employee competence utilization. Although the strength of correlation is low, the positive direction supports the theoretical based definition of competence utilization: 'ability in use'. Without allowance, performance cannot become visible. Therefore theory supports the integration of contextual elements strongly.

P$_B$4: The higher the level of all factors for trust, the higher the level of all factors of employee competence utilization	Basically trust correlates the strongest with over obligatory performance and satisfaction. Trust and over obligatory performance: **r = 0,637****, r² = 0,452 Trust and satisfaction: **r = 0,779****, r² = 0,606 The correlation is positive, significant and on a strong medium level. Also all indicators for trust correlate strongest with over obligatory performance: Fairness: r = 0,615** Clear Goals: r = 0,639** Network structure: r = 0,431** Delegation level: r = 0,577** and with satisfaction: Fairness: r = 0,762** Clear Goals: r = 0,684** Network structure: r = 0, 539** Delegation level: r = 0,676**		**Yes, major aspects identified** r = 0,637**, r = 0,779**
	In detail the strongest correlations can be found: Accountability -> intrinsic motivation **r = 0,649****, r² = 0,42** accepted goals -> growth perspectives **r = 0,601****, r² = 0,36** Shared norms -> commitment		**Yes, major aspects identified** r = 0,649** r = 0,601** r = 0,596** r = 0,582**

	r = 0,596**; r² = 0,36** Communication -> intrinsic motivation **r = 0,582****; r² = 0,34** Ability to take responsibility and intrinsic motivation **r = 0,692****; r² = 0,48**		r = 0,692**

Results support that the following elements are of highest impact with regard to correlation: Trust does have the strongest correlation with over obligatory performance (r = 0,673**) and satisfaction (r=0,779**). The correlation is positive, significant and of high medium strength. Notably accountability, shared norms and the ability to take responsibility impact these outcomes predominately. Correlations towards productivity and retention are lower. Whilst correlations with productivity are still positive and significant, retention alone does not show a significant correlation, and even shows a negative impact of trust indicators on employee competence utilization indicators. (However as mentioned before it has to be assumed that these results were influenced by an inappropriate scale.)

P$_B$5: The higher the level of trust, the higher the level of innovation	All trust indicators are positive and significantly related to innovation , on a medium level between: r = 0,179** - 0, 508** Fairness: r = 0,444**, r² = 0,20** Accountability: r = 0,412**, r²= 0,21** **Clear Goals: r = 0,508, r² = 0,26**** Shared Norms: r = 471**, r²=0,22**		**Maybe, for specific elements** r = 0,179** - 0, 508**

The correlation between trust elements and innovation is positive, significant and on a medium level. Fairness, especially accountability of the trustee and clear goals, especially acceptance of goals and sharing norms show high correlations. Innovation captures a special attention within the competence concept used in the research study. Based on the finding in the theoretical part, that bridging social capital is a necessary support for innovation, the accountability of the trustee and shared norms might promote innovation on one hand whereas factors like strong internal bonding ties show lower correlations.

P$_B$6: The higher the evaluation in trust specific situations, the higher the level of employee competence utilization	All situations are positive and significantly related to employee competence utilization on a level between r = 0,290** and 0,357** Situation A, 'allowance of constructive criticism & take it seriously': r = 0,327** Situation D, 'problem solving' r = 0,353** and Situation F, 'acceptance of decisions' r = 0,357**		**Maybe, also supported by qualitative results** r = 0,290**- 0,357**

The chosen trust vignettes are situations in which trust is manifested. Therefore all vignettes show high and significant correlations to trust (r = 0,518** - 0,864**). Further to this it was asked to analyze correlations between trust vignettes and employee competence utilization. As a result all correlations are positive, significant but on a low

level. Here the highest values can be found in situation D and situation F, which refers to 'problem solving instead of problem description' and the 'acceptance of decisions'. But also situation A, which refers to 'seriously taken criticism' ranks high in terms of correlation. However the positive and significant correlation makes these vignettes valuable as a situation based implementation in practice.

P$_B$7: The higher the level in business excellence, the higher the level of trust	The elements of continuous improvement, fairness and clear goals are positive, significantly related to trust on a level of: Continuous improvement: r = 0,711**, r² = 0,506** Fairness: r = 0,648**, r² = 0,420** Clear Goals: r = 0,612**, r² = 0,375**	**Yes** r = 0,612** – 0,711**	
P$_B$8: The higher the level of business excellence, the higher the level of employee competence utilization	The elements of continuous improvement and fairness are positive and significantly related to employee competence utilization on a level of: Continuous improvement: r = 0,313**, r² = 0,098** Fairness: r = 0,263**, r² = 0,069**		**Maybe, mutual basis with specific parts of the trust concept** r = 0,263**– 0,313**

Based on the pilot interviews and literature the mutual basis between specific business excellence elements and trust was expected. Continuous improvement though leads to positive, significant and high correlations with trust (r = 0,612** – 0,711**). Significant correlations to employee competence utilization can be shown either, but on a much lower level. This result suggests that additional elements of the underlying trust concept are needed in order to achieve high levels of potential release.

Source: Author's figure based on empirical results

Detailed numbers along with propositions:

P$_B$1: **The higher the evaluation of personal characteristics, the higher the level of employee competence utilization**

P$_B$1.1: **The higher the personal predisposition for trust, the higher the level of trust**

P$_B$1.2: **The higher the personal predisposition for trust, the higher the level of employee competence utilization**

General predisposition of the trustor towards trust

Correlation Employees n=206 Predisposition trustor

Do you have a general positive expectation towards your environment?			
		Trust / r	Trust / r²
Correlation / Pearson	TFR_4	,559**	0,312**
Correlation / Spearman Rho	TFR_4	,440**	0,194**

Correlation Employees n=206 Predisposition trustor

Do you have a general positive expectation towards your environment?			
		ECU / r	ECU / r²
Correlation / Pearson	TFR_4	,421**	0,177**
Correlation / Spearman Rho	TFR_4	,244**	0,060**

Source: Author's table based on employee survey results

P$_B$1.3: **The higher the evaluation of the personal characteristics (trustworthiness) of the trustee by the trustor, the higher the level of ECU**

Trustworthiness perceived by the trustor towards the trustee

Correlation Employees n=206 Trustworthiness

Combined questions related to trustworthiness of the trustee evaluated by the trustor			
		Trust / r	Trust / r²
Correlation / Pearson	TFA_4, TFC_3, TFC_6, TFC_1	,748**	0,608**
Correlation / Spearman Rho		,675**	0,456**

Correlation Employees n=206 Trustworthiness

Combined questions related to trustworthiness of the trustee evaluated by the trustor			
		ECU / r	ECU / r²
Correlation / Pearson	TFA_4, TFC_3, TFC_6, TFC_1	,431**	0,186**
Correlation / Spearman Rho		,265**	0,070**

Source: Author's table based on employee survey results

Predictability (TFA) perceived by the trustor towards the trustee

Correlation Employees n=206 Predictability trustee

Are words and actions everywhere and always consistent?			
		Trust/r	T / r²
Correlation / Pearson	TFA_4	,543**	0,295**
Correlation / Spearman Rho		,484**	0,234**

Correlation Employees n=206 Predictability trustee

Are words and actions everywhere and always consistent?			
		ECU/r	ECU / r²
Correlation / Pearson	TFA_4	,310**	0,096**
Correlation / Spearman Rho		,261**	0,068**

Source: Author's table based on employee survey results

Benevolence (TFC) perceived by the trustor towards the trustee

Correlation Employees n=206 Benevolence trustee

Do you have the feeling that your company cares for you as a person?		Trust/r	Trust / r²
Correlation / Pearson	TFC_3	,587**	0,345**
Correlation / Spearman Rho		,549**	0,301**

Correlation Employees n=206 Benevolence trustee

Do you have the feeling that your company cares for you as a person?		ECU/r	ECU / r²
Correlation / Pearson	TFC_3	,419**	0,176**
Correlation / Spearman Rho		,321**	0,103**

Source: Author's table based on employee survey results

Integrity (TFC) perceived by the trustor towards the trustee

Correlation Employees n=206 Integrity trustee

Does your working environment confirm that the people around you are integer?		Trust/r	Trust / r²
Correlation / Pearson	TFC_6	,534**	0,285**
Correlation / Spearman Rho		,437**	0,191**

Correlation Employees n=206 Integrity trustee

Does your working environment confirm that the people around you are integer?		ECU/r	ECU / r²
Correlation / Pearson	TFC_6	,343**	0,118**
Correlation / Spearman Rho		,179*	0,032*

Source: Author's table based on employee survey results

Ability (TFC) perceived by the trustor towards the trustee

Correlation Employees n=206 Ability trustee

Is the sentence true: ' I trust that my boss is going to make the right decision.		Trust/r	Trust / r²
Correlation / Pearson	TFC_1	,567**	0,321**
Correlation / Spearman Rho		,511**	0,261**

Correlation Employees n=206 Ability trustee

Is the sentence true: ' I trust that my boss is going to make the right decision.		ECU/r	ECU / r²
Correlation / Pearson	TFC_1	,221**	0,049**
Correlation / Spearman Rho		0,081	0,007

Source: Author's table based on employee survey results

P_B2: **The higher the evaluation of relational characteristics, the higher the level of employee competence utilization**

Relationship between trustor and trustee

Correlation Employees n=206 Relationship trustor/trustee

Combined questions related to relationship of the trustee and the trustor		ECU / r	ECU / r²
Correlation / Pearson	TNO_1, TCV_1, TCS_1	,618**	0,382**
Correlation / Spearman Rho		,450**	0,203**

Correlation Employees n=206 Relationship

Do you have regular contact to other employees in the company?

		ECU/r	ECU / r^2
Correlation / Pearson	TNO_1	,358**	0,129**
Correlation / Spearman Rho		,242**	0,059**

Correlation Employees n=206 Relationship

Do you know exactly what is expected from you?			
		ECU/r	EECU / r^2
Correlation / Pearson	TCV_1	,557**	0,310**
Correlation / Spearman Rho		,449**	0,202**

Correlation Employees n=206 Relationship

Are there clear signals about what is accepted in your company and what not (rules of the game)?			
		ECU/r	ECU / r^2
Correlation / Pearson	TCS_1	,397**	0,158**
Correlation / Spearman Rho		,285**	0,081**

Source: Author's table based on employee survey results

P_B3: The higher the evaluation of situational/contextual factors, the higher the level of employee competence utilization

Situational context for self-directed action

Correlation Employees n=206 Situational Context

In how far do you have the possibility to decide free about your placed task?			
		ECU/r	ECU / r^2
Correlation / Pearson	TDD_3	,251**	0,063**
Correlation / Spearman Rho		,196**	0,038**

Source: Author's table based on Employee Survey Results

P_B4: The higher the level of all factors for trust, the higher the level of all factors for employee competence utilization

Correlation trust – employee competence utilization – level 2 - employee survey

Correlation Employees n=206				
Correlation r Spearman-Rho	Retention (ER)	Over obligatory Performance (EO)	Productivity (EP)	Satisfaction Level (ES)
Fairness (TF)	-0,1	**,615****	,177*	**,762****
Clear Goals & Transparence (TC)	-0,012	**,639****	,173*	**,684****

Network Structure (TN)	0,104	**,431****	,249**	,539**
Delegation Level (TD)	-0,058	**,577****	,333**	**,676****
Coefficient of Determination = r² Spearman-Rho				
Fairness (TF)	0,01	0,38**	0,03**	0,58**
Clear Goals & Transparence (TC)	0,00	0,41**	0,03**	0,47**
Network Structure (TN)	0,01	0,19**	0,06**	0,29**
Delegation Level (TD)	0,00	0,33**	0,11**	0,46**

**.The correlation is significant on a level of 0,01 (2-sided)

**.The correlation is significant on a level of 0,05 (2-sided)

Source: Author's table based on employee survey results

Correlation trust / employee competence utilization – level 3 - employee survey

Correlation based on Spearman-Rho**	Commitment (EOC)	Engagement (EOE)	Intrinsic Motivation (ESI)	Growth Perspectives (ESG)
Employees n=206				
Accountability (TFA)	0,592**	0,427**	0,649**	0,545**
Reciprocity (TFR)	0,470**	0,480**	0,523**	0,495**
Accepted Goals /(TCA)	0,528**	0,419**	0,464**	0,601**
Shared Norms (TCS)	0,596**	0,388**	0,552**	0,472**
Communication (TNC)	0,448**	0,335**	0,582**	0,435**
Ability to take responsibility (TDA)	0,499**	0,322**	0,692**	0,432**

**. The correlation is on a level of 0,01 (2-sided) significant

Source: Author's table based on employee survey results

P$_B$5: The higher the level of trust, the higher the level of innovation

Correlation trust – innovation - employee survey

Coefficient of Determination r² based on Spearman Rho

Trust indicators	Correlation coefficient r Innovation	Coefficient of determination r² Innovation

Fairness		**0,20****
Clear Goals		**0,26****
Network Structure		0,11**
Delegation Level		0,12**
Fairness – Accountability		**0,21****
Clear Goals – Shared Norms		**0,22****

**.The correlation is significant on a level of 0,01 (2-sided)

P$_{B5}$: The higher the evaluation in trust specific situations, the higher the level of employee competence utilization

Moving a step further and touching on trust specific situations it is of interest how these correlate with employee competence utilization. The trust situations were developed in the course of the pre-studies and were also evaluated within the management study. The respective trust vignettes and their mean and median values are listed in the following table

Trust-vignettes – employee survey – descriptive analysis

Descriptive Statistic Employee = 206 Situations			
		statistic	standard deviation
Situation_A Allowance of constructive criticism & take it seriously - MEAN (v_63,v_169,v_28)	Mean	3,6926	,05695
	Median	4,0000	
Situation_B Dealing with failures – MEAN (v_53,v_54,v_129,v_130,v_144,v_146,v_164)	Mean	3,2150	,05068
	Median	3,2857	
Situation_C Freedom in decision situations – MEAN (v_33,v_35,v_36,v_168).	Mean	3,3859	,05531
	Median	3,5000	
Situation_D Problem solving instead of problem description – MEAN (v_147,v_167,v_162).	Mean	3,2718	,07599
	Median	3,3333	
Situation_E Work efficiency in the absence of leaders - v_58.	Mean	4,1408	,06362
	Median	4,0000	
Situation_F Acceptance of decisions –MEAN(v_46,v_47,v_48,v_49,v_57,v_41,v_135,v_142,v_143)	Mean	3,0701	,04602
	Median	3,1111	

Trust-vignettes – employee survey – correlations with employee competence utilization

Correlation Employee n=206 – Situations

based on Spearmann Rho	Employee competence utilization ECU = r	Employee competence utilization ECU = r²
Situation_A **Allowance of constructive criticism & take it seriously**	,327**	0,107
Situation_B Dealing with failures	,294**	0,086
Situation_C Freedom in decision situations	,294**	0,086
Situation_D **Problem solving instead of problem description**	,353**	0,125
Situation_E Work efficiency in the absence of leaders	,290**	0,084
Situation_F **Acceptance of decisions**	,357**	0,127

**.The correlation is significant on a level of 0,01 (2-sided)

**.The correlation is significant on a level of 0,05 (2-sided)

Source: Author's table based on employee survey results

P_B**7: The higher the level of business excellence, the higher the level of trust**

P_B**8: The higher the level of business excellence, the higher the level of employee competence utilization**

Correlation of business excellence - trust and employee competence utilization

Correlation Employee n=206 BE	Spearman Rho / r		Spearman Rho / r²	
	Trust	ECU	Trust	ECU
Goal deployment process Clear Goals (EBE_C)	,612**	,169*	0,375**	0,029*
Responsibility & failure culture Fairness (EBE_F)	,648**	,263**	0,420**	0,069**
Change & Innovation Continuous improvement (EBE_KVP)	,711**	,313**	0,506**	0,098**
Performance monitoring EBE_General	,485**	,265**	0,235**	0,070**

**.The correlation is significant on a level of 0,01 (2-sided)

Source: Author's table based on employee survey results

APPENDIX 7 EMPIRICAL STUDY - UNDERLYING DATA FROM MANAGEMENT STUDY

Table: Descriptive Statistics Management - Management Survey

Descriptive Statistics Management n=11					
	trust (ET)	ETF	ETC	ETN	ETD
Median	3,6417	3,5417	3,5000	4,1167	3,6667
Mean	3,5392	3,5417	3,1515	4,0545	3,4091
Descriptive Statistics Management n=11					
	(ECU) EE	EER	EEO	EEP	EES
Median	3,7159	4,0000	3,3750	3,0000	4,0000
Mean	3,5515	3,8182	3,2841	3,0364	3,6182

Source: Author's Table based on Management Survey (E)

Table: Correlation T/E Manager

Correlation T/E Manager (n=11)		r	r²
		EECU	EECU
Correlation / Pearson	ETrust	,934**	,872**
Correlation / Spearman-Rho	ETrust	,827**	,684**

Source: Author's Table based on Management Survey ET = trust, EE = ECU

Table: Correlation (r,r²) Manager – Spearman-Rho

Correlation TX/EX Management n=11, r					
		EER	EEO	EEP	EES
Spearman-Rho	ETF	,030	,239	,614*	,207
Spearman-Rho	ETC	-,061	,507	,416	,406
Spearman-Rho	ETN	,538	,430	,777*	,624*
Spearman-Rho	ETD	,390	,529	,781**	,650*

**.The correlation is significant on a level of 0,01 (2-sided)

**.The correlation is significant on a level of 0,05 (2-sided)

Correlation TX/EX Management n=11, r²					
		EER	EEO	EEP	EES
Spearman-Rho	ETF	0,001	0,057	0,377	0,043
Spearman-Rho	ETC	0,004	0,257	0,173	0,165
Spearman-Rho	ETN	0,289	0,185	0,604	0,389
Spearman-Rho	ETD	0,152	0,280	0,610	0,423

Source: Author's Table based on Management Survey

Table: Correlations (r,r²) TX/EX Manager – Pearson

Correlations TX/EX Management n=11, r		EER	EEO	EEP	EES
Correlation / Pearson	ETF	0,185	0,315	0,818	0,542
Correlation / Pearson	ETC	0,072	0,602	0,467	0,557
Correlation / Pearson	ETN	627*	0,581	0,794	0,712
Correlation / Pearson	ETD	0,558	0,735	,813*	,795**

**. The correlation is on a level of 0,01 (2-sided)
significant
*. The correlation is on a level of 0,05 (2-sided)
significant

Correlations TX/EX Management n=11, r²		EER	EEO	EEP	EES
Correlation / Pearson	ETF	0,034	0,099	0,669	0,294
Correlation / Pearson	ETC	0,005	0,362	0,218	0,310
Correlation / Pearson	ETN	0,393	0,338	0,630	0,507
Correlation / Pearson	ETD	0,311	0,540	0,661	0,632

Source: Author's Table based on Management Survey

APPENDIX 8 EMPIRICAL STUDY - COMPARISON OF PARTICIPATING COMPANIES

Table: Results per participating company in comparison

Correlation TX/EX per Company / Spearman-Rho					
Comp 1		ER	EO	EP	ES
Spearman-Rho	TF	,226	,537[**]	,193	,591[**]
	TC	,108	,467[**]	,145	,535[**]
	TN	,087	,331[*]	,222	,622[**]
	TD	-,092	,523[**]	,264	,550[**]
Comp 2		ER	EO	EP	ES
	TF	-,174	,672[**]	,290[*]	,558[**]
	TC	,011	,735[**]	,193	,585[**]
	TN	-,021	,551[**]	,295[*]	,551[**]
	TD	,026	,668[**]	,397[**]	,474[**]
Comp 5		ER	EO	EP	ES
	TF	,045	,739[**]	,211	,819[**]
	TC	,313	,852[**]	,175	,845[**]
	TN	,124	,649[**]	,182	,718[**]
	TD	,385[*]	,732[**]	,333	,780[**]
Comp 6		ER	EO	EP	ES
	TF	-,067	,585[**]	,204	,870[**]
	TC	,019	,690[**]	,232	,727[**]
	TN	,001	,509[**]	,144	,639[**]
	TD	-,012	,619[**]	,426[**]	,840[**]
Comp 9		ER	EO	EP	ES
	TF	,131	,495	,146	,648[*]
	TC	,267	,401	,351	,582[*]
	TN	,161	,415	,270	,693[**]
	TD	,112	,154	,434	,599[*]
Comp 12		ER	EO	EP	ES
	TF	,099	,851[**]	,218	,771[**]
	TC	,134	,639[*]	,494	,354
	TN	-,035	,706[**]	,175	,442
	TD	,025	,889[**]	,162	,591[*]

**.The correlation is significant on a level of 0,01 (2-sided)

**.The correlation is significant on a level of 0,05 (2-sided)

APPENDIX 9 EMPIRICAL STUDY - PARTICIPANTS AND RESULTS FROM THE EXPERT CHALLENGE

Table: List experts for the final challenge of results

BE	Daimler AG, Werk Mannheim, Center of Leadership	Javier Villalba Diez	Geschäftsführer Center of Leadership	21.07.2014	Mannheim
Trust	Universität Bremen, artec Forschungszentrum	PD Dr. Guido Becke	becke@artec.uni-bremen.de	26.08.2014	Bremen
Trust	Universität Vechta, Zentrum für Vertrauensforschung	Pro. Dr. Martin K.W. Schweer	martin.schweer@uni-vechta.de	02.09.2014	Vechta
ECU	Otto Wassermann AG	Friedhart Reiner, Geschäftsführer	friedhart.reiner@roppo.de	08.08.2014	München
ECU	TUM München	Prof. Dr. Andreas Fleischmann	Professor - Leitung ProLehre	16.09.2014	München
BE	TECTEM, University of St. Gallen	Prof. Dr. Thomas Friedli, Managing Director	thomas.friedli@unisg.ch	25.09.2014	St. Gallen

Source: Author's table based on empirical study

Summarizing on the fields being already involved:

- Trust is a process on different level, this process has to be pictured in the model (1)

- Satisfaction, intrinsic motivation and social acceptance are valid elements of the employee competence utilization concept (2)

- The demand on the own professionalism of the employee is part of work ethics. The wisdom for professionalism is operationalized in the employee competence utilization concept. (2)

- On the other hand a general positive attitude of the trustor towards the trustee is required as an initial starting point of the trust process. (2)

- High correlation results as regards to fairness and clear goals do not only touch on personal characteristics of the trustee. They further support relationship elements with special focus on reciprocity. (2)

- Also other studies underline that trust positively promotes, commitment, satisfaction and engagement (3)

- As to the methodology a mixed methods approach is advocated. A qualitative approach allows getting to know to the topic. A quantitative approach allows testing results on reliability. (3)

- The concept of trust always includes interpersonal and systemic aspects. (3)

- The inclusion of the pedagogical perspective of competencies given by Weinert is supported (4)
- Motivation is underlined as being an integrate part of employee competence utilization. With regard to the correlation between trust and employee competence utilization, the aspect of willingness, is of highest importance. (4)
- The possibility to measure trust is very important for management. Although measurement in general has the annotation of control it is a condition for the common understanding of goals. (5)
- Trust is formed indirectly and needs to be developed over time. But trust also needs active promotion. (5)
- In general communicational and friendly environments help to increase teamwork spirit, flexibility and reciprocal assistance. (5)
- Empowerment and degree of freedom are very important. Those elements are directly linked to trust. Freedom needs to be given and taken. Trust is a condition for that. (5)
- Network and relationship are of high importance as regards to trust. But they needs to have direction, needs to be aligned to the company targets. Networking based on its own purpose is not efficient. (5) -> comment of the author: this is the reason that the model of the research at hand does include, network and goal transparency, both showing high correlations to employee competence utilization.
- Continuous improvement processes (KVP) is a well-known an useful tool for a culture of improvement (6)
- The combination of emotions and objectivities is seen as a good promoter for a culture of trust. (5) -> comment from the author: although being interpersonal related trust is always also influenced by organizational elements
- Challenging questions are: How does a supportive environment look like and what should a company do in order to achieve performance enhancing behavior? Resulting tools also referring to the business excellence environment are of interest. The initial situation of the company is important as regards to those questions. (5) -> comment from the author: results will be pictured in a balanced scorecard in order to give managerial suggestions.

Summarizing on additional comments further to the aspects already involved:

- The participation of companies within the empirical study is itself a signal of a certain trust level within the company (2) -> comment from the author: this aspect has been integrated in the explanations on the company selection process

- A validation of results with one of the participating companies is of value (2) -> comment from the author: this aspect has been taken. As a result one company was included in the final challenging round with experts.

- Trust promotes self-efficacy and self-confidence and self-esteem. But self-efficacy bears on both, former experiences and individual present relationships as regards to the respective leader (3) -> comment from the author: if employees believe that they can achieve their goals through their behavior they are intrinsically motivated to act. 'If we believe that a task is reachable through our own effort, we will go for it'. [400] Also Luhmann comments on self-efficacy. He states, that humans and social systems are more likely willing to trust if self-efficacy (self-confidence) is inherent. It enables them to face a possible betrayal of trust with countenance. But the question is, if self-efficacy is the basis for trust of if self-efficacy only can be learnt in situations trust is proven.[401]

- Explain necessary managerial actions with regard to all 4 fields of the employee competence utilization concept. Trust can also be promoted if non-willing is allowed. (4)

- As regards to the target of highest possible achievement of competence utilization boundaries have to be set by the organization to avoid over motivation and burnout. The leader of the organization has to set a good example (4) -> comment from the author: a positive idea on human beings, as well as the integration of benevolence in the concept of trust should avoid this effect. Further to this engagement, satisfaction and intrinsic motivation should be active as a balance of needs. Employee's engagement with job satisfaction is relevant and that job satisfaction itself is relevant toward company's performance. As explained by Ferreira et al. engagement even is considered as an antipode of burnout. [402]

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[400] Werth & Mayer (2007), p. 168
[401] Luhmann (2014), p. 102 with reference to B.R.C. Kwant 1965, S.96
[402] Ferreira & Real de Oliveira, Elizabeth (2014), p. 337, here they refer to Malslach, Schaufell and Leiter 2001)

- A culture of trust does not mean that all decisions are based on the opinion of the entire community. (5) -> comment from the author: trust is not a harmony concept.[403] Also Malik points out that integrity, consistency and predictability are of much higher importance than collegiality, anti-dictatorial leadership and the attempt to do everything right. Authenticity is more important that just being open with everybody. Failures or changes in decision are allowed as long as they are well explained and traceable. Predictability and reliably are of utmost importance. The target should not be to tell everything what you think, but what you tell should lead to a consequent and reliable behavior [404]

- The combination of emotions and objectivities is seen as a good promoter for a culture of trust. (5) -> comment from the author: although being interpersonal related trust is always also influenced by organizational elements

- Challenging questions are: How does a supportive environment look like and what should a company do in order to achieve performance enhancing behavior? Resulting tools also referring to the business excellence environment are of interest. The initial situation of the company is important as regards to those questions. (5) -> comment from the author: results will be pictured in a balanced scorecard in order to give managerial suggestions.

Summarizing on limitations and shortfalls:

- The trust level may differ from relationship to relationship (1) -> comment from the author: this aspect is excluded from the research study

- Most often jobs are quit because of disturbed relationship to the respective leader (1) -> comment from the author: at this point business excellence might work as a promoter towards mature leadership. This aspect is underlined in another comment: Promoting effect of a business excellence system as regards to sensitization of junior leaders is thinkable (3)

- In the field of strategy trust must not be used in a calculative manner. The condition for trust is authenticity. Trust has not to be used purely strategically (3)

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[403] Endress (2008), p. 3 he also refers to Heisig/Littek,2003, trust is not just a harmony concept, but from sociological perspective structural ambivalent
[404] Malik (2006), p. 147-149

- Either trust should not be seen as only resource for employee competence utilization (3)
- The model does only allow an indirect differentiation of the trust concept with regard to individual and collective trust in organizations (3)
- Trust is strongly linked to leadership and personality. A culture of trust missing the element of reliability does only work short term. A culture purely based on one dominating leader is predominantly based on his or her competence. (5) -> comment from the author: at this point the combination of interpersonal and organizational trust becomes important
- There is not one universal concept to increase the perceived trust level as also the character of employees pictures a wide range. There are employees that feel good and develop in high trust cultures whereas others need mistrust elements, in which impulse raises from scrutinizing and challenging. (5)
- If networks become too strong, they are highly bonding and may inhibit individual responsibility and flexibility as well as newcomers might be excluded due to clique building effects. (5)
- Continuous improvement concepts also have its downsides if they are used too systematic. The danger is that they simply degenerate to a cover which even might be inhibiting innovation. (5)
- In case a business excellence system is not linked to trust it will only perform on short term basis. If the philosophy is not in a mutual balance with real trust it tends to be based on calculative trust levels and may as a result be perceived negatively (6)
- The requirements on action modes are different in different cultures and countries. (6)
- The willingness to learn as well as trust is a value that is incorporated in the concept of continuous improvement. It is of major importance that continuous improvement processes are not only be used in order to solve a specific problem. They furthermore should be based on a general free motivational possibility supported by systemic installed rooms to maneuver. (6)
- It would be of interest to evaluate the level of employee competence utilization in a company with a very low trust level. (7)

- Management and employees do have different views. Whereas management is more interested in productivity figures, employees do care much more on engagement, commitment and satisfaction. (7)

- Impact of single leaders is not taken into account although they are influencing the correlation. Leadership levels and personality levels are important. (7)

- A downside of clear goals may be that people are less motivated to care for their own goals. Consequently clear goals and delegation level have to be balanced. BE might be a good promoter in order to increase teamwork on the basis of responsibility (7)

- Would a culture of scarce and fear also lead to performance? (7) -> comment from the author: as results have shown essential elements of the trust concept like benevolence, integrity but also reciprocity are to be seen contrary to a culture of scarce and fear. Nevertheless it can be imagined that scarce and fear induce productivity on a short term basis whereas long term sustainable 'over-obligatory' performance can only be expected based on real trust.

- There is no guarantee on the ethical grounding of targets of the company. It might only be assumed that if a manager is generally positive oriented towards human beings he will not go for non-ethical targets. (7)