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FACULTY OF ECONOMICS AND MANAGEMENT



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**EMPLOYEE SATISFACTION AND ITS IMPACT ON
COMPANY VALUE**

DOCTORAL THESIS

Submitted for the Doctor's degree in Management science (Dr.sc.admin.)

Subfield Business Management

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Riga, 2015

The doctoral thesis was carried out at the Chair of International Economics and Business, Faculty of Economics and Management, University of Latvia, from 2011 to 2015.



Form of the thesis: Dissertation in Management science, Business Management.

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The thesis will be defended at the public session of the Promotional Council of the Management Science and Demography, University of Latvia, on 11th of September, 2015, Aspazijas blvd.5, Riga.

The thesis is available at the Library of the University of Latvia, Kalpaka blvd. 4, Riga.

This thesis is accepted for the commencement of the Doctor`s degree in Management Science on 20th March 2015 by the Promotional Council of the Management Science and Demography, University of Latvia.

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ANNOTATION

The main subject of this dissertation is employee satisfaction and its impact on company value. The investigation of working circumstances and conditions and their influence on employee satisfaction and company value is the main theme.

In the dissertation, a comparison is based on different leadership styles, workplace environment and circumstances. The study “Great Place to Work[®] 2007 and 2009” and the best companies who won the contest will be the basis of further research activities. For the dissertation, a comparison between the financial results and the employee satisfaction of the winning companies will take place. The preminent research question focuses on the relationship between employee satisfaction (including leadership style) and company value.

The main task of the dissertation will be to prove that there is a relation between employee satisfaction and company value. This dissertation is based on a deep theoretical research through literature regarding workplace environment, leadership style, management methods, employee satisfaction and company value. Based on this fundamental research which also includes a secondary data analysis from the USA, in which the results of Great Place to Work[®] were compared with financial results. In a primary data analysis conducted in Germany this dissertation evaluates the relation between employee satisfaction and company value and shows the empirical findings. Based on an employee survey and a culture audit, attending companies were ranked from 1 to 100. In this research the author will compare the financial results from 30 randomly selected companies which attended the Great Place to Work[®] contest 2007 and 2009 with 30 randomly selected companies which didn't attend the contest. Additionally, in a research case study, the relation between equity value and Great Place to Work[®] Scores of 11 companies randomly selected from the Great Place to Work[®] Institute were analyzed.

To consolidate and strengthen the results of the research some additional statistical research methods were used.

The main results of this research are that there is evidence about the relation between employee satisfaction and company value.

Key words: *Employee satisfaction, company value, secondary and primary empirical analysis*

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LIST OF ABBREVIATIONS

AMEX	American Express Company
BHPS	British Household Panel Survey
BSC	Balanced Score Card
CEO	Chief Executive Officer
CF	Cash Flow
CLIMB	Create, let, involve, manage, build
CV	Company Value
DCF	Discounted Cash Flow
Df	Degree of Freedom
e.g.	exempli gratia (latin)
EBIT	Earnings before Interest and Taxes
ECHP	European Community Household Panel
ES	Employee Satisfaction
EV	Equity Value
F	F-Value
GPTW	Great Place to Work [®]
Hrsg.	Herausgeber (editor)
HPWOs	High-performance Work Organizations
HR	Human Resources
IDW	Institut der Wirtschaftsprüfer
M&A	Mergers and Acquisition
MWW	Mann–Whitney–Wilcoxon
N	Number
NASDAQ	National Association of Securities Dealers Automated Quotations
NY	New York
NYSE	New York Stock Exchange
p.a.	per anno
PCC	Pearson Correlation Coefficient
P&L	Profit & Loss
r	Correlation Coefficient
r ²	Coefficient of Determination
ROA	Return on Assets

Sig.	Significance Level
SME	Small and medium enterprises
SPSS	Predictive Analysis Software
StB	Steuerberater (Accountant)
t	t-value
T€	Thousand Euro
TQM	Total Quality Management
UK	United Kingdom
USA	United States of America
vs	versus
WACC	Weighted Average Cost of Capital
WERS	Workplace Employee Relations Survey
WPHG	Wertpapierhandelsgesetz
Z	Test Value Mann-Whitney
ZfbF	Zeitschrift für betriebswirtschaftliche Forschung
ρ	Rho

INTRODUCTION

Actuality of topic and novelty

The present economic situation forces enterprises in nearly every industry to take every chance they can get to secure their position in the market and to make a successful job^{1 2}.

Company managers usually cannot influence circumstances in the environment, but they can influence conditions inside the company. One of the most important factors is the human resources. How content are employee's with their working conditions? What kind of emotional climate does one have in the group? Leadership style seems to be an important factor that determines whether activities are successful or not. Science supports this theory. For example Lutz v. Rosenstiel³ or Fredmund Malik⁴ argues that there is a very strong relation between those factors. Numerous studies and authors support the idea that there is a link between employee satisfaction and customer satisfaction, leadership, productivity, and financial results.^{5 6 7 8} Based on a deep theoretical research, a secondary data analysis from the United States and a primary data analysis from Germany, the author also showed in several publications that there is a relation between employee satisfaction and financial results, respectively company value.^{9 10}

However, the question legitimately remains whether the cause-effect relationship between employee satisfaction and company value could also be the other way round. It may also be stated that successful companies - i.e. those ones with a high company value – can create improved employee satisfaction due to their financial capabilities, also utilized for employees'

¹ Glebe, D. (February 17, 2009). *Börse verstehen: Die globale Finanzkrise* (Auflage: 1). Norderstedt: Books on Demand. p. 96 (Referring to the world wide crisis at the bank market and the influence of nearly all other economic branches 2008/09)

² Schneider, A. (2009). *Die Finanzkrise und ihre Auswirkungen auf den Mittelstand - Eine Analyse*. Paderborn, Oldeburg: Igel Verlag. pp. 3

³ Rosenstiel von, L. (2003). *Motivation managen*. Weinheim, Basel, Berlin: Beltz Verlag. pp. 52

⁴ Malik, F. (2006). *Führen, Leisten, Leben*. Frankfurt / New York: Campus Verlag. pp. 65

⁵ Freeman, R. B. (1978). *Job Satisfaction as an Economic Variable*. *American Economic Review: Papers and Proceedings*. p 68

⁶ Rötzel, P. (2012). *ZfB*. Wiesbaden: Gabler Verlag. p. 82

⁷ Wright, B.E. (2001). *Public sector work motivation: review of current literature and a revised conceptual model*. *J Public Adm Res Theory* 11 (4). Pp. 559-586

⁸ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). *Are the 100 best better? An empirical investigation of the relationship between being a "great place to work" and firm performance*. *Personnel Psychology*. p.56, pp. 965-993

⁹ Brenninger H.-J. & Neuert J. (2014). *Company Value and Employee Satisfaction –Theoretical Analysis and Empirical Findings- Management Studies*. David Publishing Company, 16710 East Johnson Drive, City of Industry, CA 91745, USA. The publication of the paper is in progress.

¹⁰ Brenninger H.-J. & Neuert J. (2014). *Business Performance Factors, Elements of Employee Satisfaction and Company Value - Theoretical Considerations and Empirical Evidence*. *The Business Review Cambridge*. Library of Congress Washington, USA. The publication of the paper is in progress

benefits. The author assumes that there may be a mutual influence of employee satisfaction and company value on each other. Due to the fact that though far there is no clear empirical evidence for that, the author follows Herzberg's "Motivation Theory"¹¹ and his suggestions that higher salaries or more hygienic factors don't lead to more satisfaction, and therefore investigate the relationship between employee satisfaction as the independent variable and company value as the dependent variable.

Research object

The research object of the dissertation is comprised of businesses and companies which have participated in the Great Place to work contest 2007 and 2009 and a representative selection of other German companies as a reference group.

Research subject

The research subject of the dissertation is aiming at outlining and examining the cause-effect relation of employee satisfaction and company value in business firms.

The main purpose and aim of the dissertation:

The main purpose and aim of the dissertation will be finding out evidence about the relation between employee satisfaction and the level of company value and to elaborate suggestions for managers and leaders for at last improving their company value. "Because of the deficit of external information the value of human capital is often underestimated." Numerous studies and articles support the idea that there exists a link between employee satisfaction and customer satisfaction, leadership, productivity and financial results.^{12 13} Therefore the basic decision has risen to conduct an in-depth investigation into this research question. Of course it has to be stated that literature and research indicate also a number of other factors which influence the company value. Among them, factors like, marketing efficiency^{14 15} product quality, innovation and technological standards^{16 17}, the relationship

¹¹ Herzberg, F., Mausner, B. & Snyderman, B. (1957). *The Motivation To Work*. New York: John Wiley

¹² Hinterhuber, H. (1990). *Wettbewerbsstrategie* (2. Auflage). Berlin, New York: DeGruyter. pp. 50

¹³ Kölb, C. (2009). *Konzeption eines Kennzahlensystems für das strategische Personalcontrolling*, EFQM-Modell, Scandia Navigator. Hamburg: Verlag Diplomica. pp. 38-39

¹⁴ Srinivasan S., Hanssens D. M. (2009). *Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions*. American Marketing Association. *Journal of Marketing Research* 293 Vol. XLVI, pp. 293-312

¹⁵ Rao, Ramesh K.S. & Bharadwaj N. (2008). *Marketing Initiatives, Expected Cash Flows, and Shareholders' Wealth*. *Journal of Marketing*, 72 (January). 16-26

¹⁶ Henard, D. & Szymanski, D. (2001). *Why Some New Products Are More Successful Than Others*, *Journal of Marketing Research*, 28 (August). 362-79

with suppliers,^{18 19} the overall market and industry situation as well as the influence of financial authorities and the public^{20 21} etc. can be mentioned. These factors are considered in a literature analysis conducted by the author in the first chapter. This research therefore concentrates on the particular impact of human resources especially employee satisfaction on the company value, not neglecting that it is just one influencing variable among others. The rationale for that is based on the notion that human resources are still the most important factor of management and also the most difficult one to handle^{22 23 24 25 26}.

Researching each one of the potential influencing variables would require a voluminous research on its own. This is why the author is focusing on the impact of employee satisfaction by keeping the other factors *ceteris paribus*.

Task

In the dissertation the main task is to conduct a comparative analysis between “high employee satisfaction” companies and “normal” German companies to gain evidence whether companies with higher employee satisfaction have a higher company value than “normal” German companies (companies which did not compete in the GPTW contest or does not win). The comparison is based on the contests Great Place to Work[®] 2007 and 2009 in Germany. The best companies who won the contest will be the basis of further explanations and research activities. For the research, a comparison between their financial results and their results in the Great Place to Work[®] Contest will take place. The main goal of this research is to elaborate suggestions for managers and leaders for at least improving their company value.

- Is there any remarkable connection between leadership style, employee satisfaction and company value? This will be an important question in the dissertation.

¹⁷ Rubera, G. and Kirca. Ahmet H. (2012). Firm Innovativeness and its Performance Outcomes: A Meta-analytic Review and Theoretical Integration. *Journal of Marketing*, 76(3). 130-147

¹⁸ Hollos, D., Blome C., & Foerstl, K. (2012). Does sustainable supplier cooperation affect performance? Examining implications for the triple bottom line. *International Journal of Production Research*, 50(11), 2968-2986

¹⁹ Taylor & Francis (2012). *International Journal of Production Research* (Vol. 50, No. 11)

²⁰ Hamada, R.S. (1969). Portfolio Analysis, Market Equilibrium and Corporation Finance. *Journal of Finance*. pp. 13-31

²¹ Bartik, T. J. (1991). Who Benefits from State and Local Economic Development Policies? Kalamzoo, MI: Upjohn Institute

²² Malik, F. (2006). *Führen, Leisten, Leben*. Frankfurt / New York: Campus Verlag. pp. 65

²³ Rosenstiel von, L. (2003). *Motivation managen*. Weinheim, Basel, Berlin: Beltz Verlag. pp. 52

²⁴ Freeman, R. B. (1978). Job Satisfaction as an Economic Variable. *American Economic Review: Papers and Proceedings*. P. 68

²⁵ Rötzel, P. (2012). *ZfB*. Wiesbaden: Gabler Verlag. p. 82

²⁶ Wright, B.E. (2001). Public sector work motivation – a review of current literature and a revised conceptual model. In: *Journal of Public Administration Research Theory* (Vol. 11). No. 4, pp. 559-586

- The investigations can explore what managers can copy from the “Best Companies” to get personal advancement for employees and competitive advantage for the business.

Definition of research questions and development of the hypothesis

The main subject is employee satisfaction in the company they work for. The investigation of working circumstances and conditions and their influence on employee satisfaction and company value is investigated by formulating the following questions:

- What are the reasons and issues affecting employee satisfaction? What are the possibilities influencing employee satisfaction in a positive way? How can employee satisfaction be managed?
- What are the factors influencing financial results?
- Is there a relation between employee satisfaction and company value?

Does higher employee satisfaction lead to higher company value, or do better financial results and therefore company value lead to a higher employee satisfaction. Based on Herzberg’s “Motivation Theory”²⁷ that higher salaries or more hygienic factors don’t lead to more satisfaction, the author states that employee satisfaction is the driver for financial results.

Therefore the main hypothesis of the dissertation is:

“Employee satisfaction has an impact on the level of company value.”

Theses to defend

1. The general theoretical analysis focusses on the defence of the initial thesis: “Company value is determined by significant influencing factors, in particular also by employee satisfaction.”
2. The empirical part of the dissertation therefore aims to defend the basic thesis, which reads as follows: “The level of company value is determined by the degrees of employee satisfaction as a positive relation.”

Used methods and sources

This dissertation is based on a theoretical research through literature regarding workplace environment, leadership style, management methods, company value and employee satisfaction. Based on this fundamental research which also includes a secondary data analysis from the USA in which the results of Great Place to Work[®] were compared with

²⁷ Herzberg, F., Mausner, B. and Snyderman, B. (1957). *The Motivation To Work*. New York: John Wiley

financial results, this dissertation evaluates the relation between employee satisfaction and company value with samples from the population of German companies. In the primary data analysis some statistical methods, like correlation analysis, multi regression analysis and t-test are used to do a testing of the results. Additionally in a validating case study the author conducted a primary data analysis for a small sample with some statistical methods, too.

The empirical design and the statistical procedures for testing our hypotheses are based on various secondary and primary data sets which were made available by the various sources namely the GPTW (Great Place to Work[®]) Institute and the German Government “Elektronischer Bundesanzeiger“ (German firms are forced by law to publish their financial data).

Even though there were some data restrictions due to limited public availability the data sets allowed for a number of testing procedures, which are demonstrated in the following chapters.

Limitations

- First limitation will be the data material about the selected companies because there is a big question mark, what will be available from the data, which is not in the Great Place to Work[®] study or cannot be found in the “Elektronischer Bundesanzeiger”, but could be interesting for this research.
- Second limitation: This dissertation concentrates only on the relation between employee’s satisfaction and company value. Other influences on company value are considered but could not be deeply investigated as well, because each of them would require an additional voluminous research project on its own.
- Third limitation is the timetable. The comparison takes place from Great Place to Work[®] study 2007 and the results of the study 2009.
- Fourth limitation: The empirical investigation concentrates on companies in Germany and a secondary research from the USA.

Content of dissertation

The dissertation will be structured into 4 main chapters with an introduction at the beginning and summarizing conclusions and suggestions of the dissertation study at the end.

The first chapter “Theoretical framework for the research area of Employee satisfaction and its impact on company value” will deal with leadership and management styles, reasons and methods for employee satisfaction and the relationship between employee satisfaction and financial results.

The second chapter “Theoretical model and set of hypothesis concerning Employee satisfaction as the independent variable and its impact on company value as the dependent variable” will deal with the independent variable “Employee Satisfaction” and walk through the Great Place to Work[®] Contest, the dimensions of a Great Place to Work[®], measurement of employee satisfaction and possibilities for computing company value.

The third chapter “Empirical investigation into the research hypothesis Employee satisfaction has the independent variable has an impact on the level of company value as the dependent variable” based on secondary data analysis from the USA, analyses the financial results of 30 randomly selected companies which attended the Great Place to Work[®] Contest in Germany 2007 and 2009 and compares these financial results with 30 randomly selected “normal” German companies which did not attend these contests. In a primary statistical analysis based on real world data the basic hypothesis could be fostered.

In the fourth chapter “Validating empirical case investigation for additional review of research findings”, eleven from the Great Place to Work[®] Institute randomly selected companies with their individual scores are analysed and validating case study findings are conducted. The companies were selected from the Great Place to Work[®] Institute with their Great Place to Work[®] Scores and financial data out of the “Elektronischer Bundesanzeiger” to the author in a confidential, anonymous form.

In both chapters company size, structure and the branch they are operating in, will be handled neutral but each of those companies employs less than 500 employees. The company value will be calculated on the basis of data material like balance sheet and profit/loss accounts, which have to be published in the “Elektronischer Bundesanzeiger”. The official data’s have to be in the same standard and though they give a serious base for further steps. Out of this theoretical and empirical research conclusions and suggestions can be elaborated and established.

The novelty in this research can be summarized as follows:

- An empirical investigation in Germany is based on a time series investigation and – as far as the primary analysis is concerned – on real world data from official sources of the public authorities in combination with results from the Great Place to Work[®] Contest.
- A new model of a multiple cause-effect function between business performance factors as the independent variable and company value as the dependent variable was developed.
- The author developed a rational that employee satisfaction elements like credibility, respect, fairness, pride and camaraderie form a feasible theoretical and empirically

measurable concept of employee satisfaction, allowing differentiating between great and less great “places to work” from an employees’ point of view.

- The dissertation developed empirical evidence that the set of employee satisfaction elements (credibility, respect, fairness, pride and camaraderie) indeed has an impact on company value in a sense that higher employee satisfaction increases the company value.
- The dissertation revealed empirical evidence that indeed companies with higher degrees of employee satisfaction over time are probably superior to “average” companies in terms of company value over time.

Approbation of results of research

The author published eight papers regarding the main research results of the dissertation in internationally reviewed journals and publications. Each of these publications was reviewed before the conference or release by anonymous reviewers.

1. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Development of theoretical framework, International Conference, Current Issues in Management of Business and Society Development – 2011, Riga, May 5-7, 2011, University of Latvia. (ISBN 978-9984-45-348-4, pp. 65-74)
2. Brenninger, Hans-Jürgen, Employee satisfaction: Not Fortune, but Approach, International Conference for Doctoral Students, Current Issues in Economic and Management Sciences November 10-12, 2011, Riga, University of Latvia. (ISBN 978-9984-45-417-7, pp. 114-125)
3. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Exemplary findings from the USA and possibilities for computing company Value, Global Business Management Research Conference 2011, Recent Developments in Business Management Research, Germany, University of Applied Sciences Fulda, December 2-4th. Business Management Strategies and Research Development Discussion Paper No 8 December 2013. (ISSN-No. 2194-7309, pp.96-108)
4. Brenninger, Hans-Jürgen, Company Value and Employee Satisfaction: Exemplary case study findings, International Conference, New Challenges of Economic and Business Development – 2012, May 10 - 12, 2012, Riga, University of Latvia. (ISBN 978-9984-45-519-78, pp.62-77)
5. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Conclusions and Managerial Implications, International Business and Economics Conference, Innovative Approaches of Management Research for Regional and Global Business Development,

- Austria, University of Applied Sciences Kufstein, August 3-5, 2012. Contemporary Approaches of International Business Management, Economics, and Social Research, Berlin, Germany. (ISBN 978-3-7375-1329-6), October 2014, Vol. 1, pp. 4-10)
6. Brenninger, Hans-Jürgen, Company Value and Employee Satisfaction: Primary Data Analysis for Testing the Basic Hypothesis - Employee Satisfaction has an Impact on the Level of Company Value-, International Scientific Conference New Challenges of Economic and Business Development – 2013, May 9 - 11, 2013, Riga, University of Latvia. (ISBN 978-9984-45-715-4, pp.96-105)
 7. Brenninger Hans-Jürgen; Josef Neuert, January 2014, Company Value and Employee Satisfaction –Theoretical Analysis and Empirical Findings- Management Studies, USA David Publishing Company, 16710 East Johnson Drive, City of Industry, CA 91745, USA. (ISSN 2328-2185, February 2014, Vol.2, No. 2, pp. 96-110)
 8. Brenninger Hans-Jürgen; Josef Neuert, February 2014, Business Performance Factors, Elements of Employee Satisfaction and Company Value - Theoretical Considerations and Empirical Evidence, The Business Review Cambridge, Library of Congress Washington, USA. (ISSN 1553-5827, Vol.22, Num. 1, Summer 2014, pp. 34-50)

The results of the research have been presented on a number of international conferences personally by the author

The author attended six international conferences with six different publications regarding the main subject of this dissertation. Each of these publications were reviewed before the conference by anonymous reviewers and presented at these conferences personally by the author.

1. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Development of theoretical framework, International Conference, Current Issues in Management of Business and Society Development – 2011, Riga, May 5-7, 2011, University of Latvia.
2. Brenninger, Hans-Jürgen, Employee satisfaction: Not Fortune, but Approach, International Conference for Doctoral Students, Current Issues in Economic and Management Sciences November 10-12, 2011, Riga, University of Latvia
3. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Exemplary findings from the USA and possibilities for computing company Value, Global Business Management Research Conference 2011, Recent Developments in Business Management Research, Germany, University of Applied Sciences Fulda, December 2-4

4. Brenninger, Hans-Jürgen, Company Value and Employee Satisfaction: Exemplary case study findings, International Conference, New Challenges of Economic and Business Development – 2012, May 10 - 12, 2012, Riga, University of Latvia
5. Brenninger, Hans-Jürgen, Company Value and Employee satisfaction: Conclusions and Managerial Implications, International Business and Economics Conference, Innovative Approaches of Management Research for Regional and Global Business Development, Austria, University of Applied Sciences Kufstein, August 3-5, 2012
6. Brenninger Hans-Jürgen; Josef Neuert, Business Performance Factors, Elements of Employee Satisfaction and Company Value - Theoretical Considerations and Empirical Evidence, The Finance, Global Management, Economics & Information Technology Research Conference 2014, USA, New York, May 22-25, 2014, Crown Plaza Times Square Manhattan.

Words of gratitude

First and foremost I thank my supervisor Prof. Dr. Josef Neuert, the main initiator of the doctoral program of the University of Applied Sciences Kufstein in cooperation with the University of Latvia. I am thankful for his support throughout the whole study and research process.

I gratefully acknowledge my reviewers Mr. Prof. Juris Krūmiņš, Mrs. Prof. Dr. Signe Bāliņa and Mrs. Prof. Dr. Inesa Vorončuka and all professors and their assisting people of the University of Latvia, especially Mrs. Prof. Dr. Baiba Savrina, Mrs. Prof. Dr. Erika Sumilo and Mr. Prof. Dr. Maris Purgailis for their support, additional reviews and valuable feedback.

I also thank the Great Place to Work[®] Institute providing me with data and necessary information. And last but not least thanks to my fellow doctoral students which joined me during our doctoral program.

1. THEORETICAL FRAMEWORK FOR THE RESEARCH AREA OF “EMPLOYEE SATISFACTION AND ITS IMPACT ON COMPANY VALUE”

First the literature supplements, which will be extended during the work, as it is necessary in the context, have to be analysed. These authors and their theories and works will build the theoretical base of the work. Psychology, systems, organizational culture and behavior, improving and learning organizations are the main themes and on these the statements will concentrate. Those items will be focused in theory and practise and compared with the development of company value or equity value.

The present economic situation forces enterprises in nearly every industry to take any chance they can get to secure their position in the market and to make a successful job²⁸. ”Proved decisive for the economy and other political development was however the decline in deposits the resulting restriction of credit. Also because of this insufficient accumulated capital into the economy the bankruptcy process and production shutdowns, so that the economic crisis and unemployment went worse”.²⁹ Therefore it is essential for managers to know the influencing factors on business and company performance and how to deal with them.

1.1. Influencing factors on the level of company value

The main purpose of the dissertation will be to test the hypothesis: Employee satisfaction has an impact on the level of company value.

The author starts with some theoretical considerations of business performance factors influencing company value. It has to be pointed out that literature and research studies indicate also a number of other factors - besides employee satisfaction - seem to influence the company value. Among them other factors like i.e. marketing efficiency, product portfolio and quality, innovation and technological standards, the overall market and industry situation, the relationship with suppliers, financial authorities and the public etc. have to be emphasized. Those impact factors can be classified by the intensive literature review which has been conducted by the author. Before focussing the research especially on leadership, human

²⁸ Glebe, D. (February 17, 2009). *Börse verstehen: Die globale Finanzkrise* (Auflage: 1). Norderstedt: Books on Demand. p. 96 (Referring to the world wide crisis at the bank market and the influence of nearly all other economic branches 2008/09)

²⁹ Schneider, A. (2009). *Die Finanzkrise und ihre Auswirkungen auf den Mittelstand - Eine Analyse*. Paderborn, Oldenburg: Igel Verlag. pp. 3

resources and employee satisfaction the author provides the following survey of business performance factors.

- **Marketing efficiency**

First major element of business performance can be seen in the marketing performance of companies, particularly aiming at the effective and efficient use of the marketing mix instruments like pricing policy product development, customer communication, sales promotion and public relations as well as distribution management and logistics. The marketing profession is being challenged to assess and communicate the value created by its actions on shareholder value. These demands create a need to translate marketing resource allocations and their performance consequences into financial and firm value effects. Shuba Srinivasan and Dominique M. Hanssens integrated in their research 2009 the existing knowledge on the impact of marketing on firm value.³⁰ They point out how marketing creates shareholder value, including the impact of brand equity, customer equity, customer satisfaction, research and development and product quality, and specific marketing mix actions. Also Rao and Bharadwaj (2008) pointed out the relevance of marketing through its effect on the company's cash needs and the effects of the probability distribution of future sales revenues.³¹ Several recent studies have examined the relationship between marketing and firm value, too.^{32 33} Also the relationship between brand strategy and firm value is evaluated.³⁴ It is clearly obvious that this area also contributes strongly to the overall marketing efficiency. In the last ten years the importance of brand equity grew significantly.³⁵ Brands are viewed as assets that generate future cash flows^{36 37} and investors appear to

³⁰ Srinivasan S., Hanssens D. M. (2009). Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions. American Marketing Association. *Journal of Marketing Research* 293 Vol. XLVI, pp. 293–312

³¹ Rao, Ramesh K.S. & Bharadwaj N. (2008). Marketing Initiatives, Expected Cash Flows, and Shareholders' Wealth. *Journal of Marketing*, 72 (January). 16–26

³² Barth, M. E., Clement M., Foster G. & Kasznik R. (1998). Brand Values and Capital Market Valuation. *Review of Accounting Studies*, 3 (1–2). 41–68

³³ Madden, T.J., Fehle, F. & Fournier S. (2006). Brands Matter: An Empirical Demonstration of the Creation of Shareholder Value Through Branding. *Journal of the Academy of Marketing Science*, 34 (2), pp. 224–35

³⁴ Rao, Vithala R., Agarwal Manoj K. & Dahlhoff D. (2004). How Is Manifest Branding Strategy Related to the Intangible Value of a Corporation? In: *Journal of Marketing* 68 (October). 126–41

³⁵ Keller, K. & Lehmann, D. R. (2006). Brands and Branding: Research Findings and Future Priorities. *Marketing Science* 25 (6). 740–59

³⁶ Aaker, D. A. & Jacobson, R. (1994). The Financial Information Content of Perceived Quality. In: *Journal of Marketing Research* 31 (May). 191–201

³⁷ Rao, Vithala R., Agarwal Manoj K. & Dahlhoff D. (2004). How Is Manifest Branding Strategy Related to the Intangible Value of a Corporation? In: *Journal of Marketing* 68 (October). 126–41

consider brand value in their stock evaluation.^{38 39} In sum, the efficiency of marketing management is a key element for the development of business success and company value.

▪ **Product portfolio and quality, innovation and technological standards**

The field of product portfolio and quality, innovation and technological standards also has important effects on firm success and therefore on the company value. The traditional explanation for the positive relationship between firm innovativeness and performance rests on Schumpeter's (1942) theory of profit extraction, which maintains that through innovation, companies gain a temporary quasi-monopoly position that enables them to extract rents.⁴⁰ Product quality, design, usefulness and technological standards are important success-factors, too.⁴¹ Firm innovativeness indirectly affects company value through its effects on market position and financial position. In addition innovativeness has direct positive effects on financial position and company value.^{42 43} Innovativeness has been recognized as a necessary asset that generates value in the marketplace and in the stock market.⁴⁴ The research mentioned above strongly implies that the products and services of a company are the key elements of their respective performance and achievements. Accordingly, in recent years, a lot of research has examined how firms' innovative assets and actions (e.g., research and development [R&D] investments, patents, new product introductions) contribute to firm performance and that innovativeness is also positively related with it.^{45 46 47}

Based on these studies product portfolio and quality, technology and innovation - power also seems to be an important issue for the company value.

³⁸ Barth, M. E., Clement M., Foster G. & Kasznik R. (1998). Brand Values and Capital Market Valuation. *Review of Accounting Studies*, 3 (1–2). 41–68

³⁹ Simon, C. J. & Sullivan M. W. (1993). The Measurement and Determinants of Brand Equity: A Financial Approach. *Marketing Science* 12 (1). 28–52

⁴⁰ Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. New York: Harper

⁴¹ Henard, D. & Szymanski D. (2001). Why Some New Products Are More Successful Than Others. In: *Journal of Marketing Research* 28 (August). 362–79

⁴² Rubera, G. & Kirca. Ahmet H. (2012). Firm Innovativeness and its Performance Outcomes: A Meta-analytic Review and Theoretical Integration. *Journal of Marketing* 76 (3). 130-147

⁴³ Srinivasan, S. & Hanssens, D. M. (2009). Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions. American Marketing Association. *Journal of Marketing Research* 293 Vol. XLVI, pp. 293–312

⁴⁴ Rust, R. T., Ambler T., Carpenter C.S., Kumar V. & Srivastava, Rajendra K. (2004). Measuring Marketing Productivity: Current Knowledge and Future Directions. In: *Journal of Marketing* 68 (October). 76–89

⁴⁵ Srinivasan, S. & Hanssens, D. M. (2009). Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions. American Marketing Association. *Journal of Marketing Research* 293 Vol. XLVI, pp. 293–312

⁴⁶ Tellis, G. J., Prabhu, J. C. & Chandy R. K. (2009). Radical Innovation across Nations: The Preeminence of Corporate Culture. *Journal of Marketing* 73 (January). 3–23

⁴⁷ Sorescu, A. B. & Spanjol J. (2008). Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods. *Journal of Marketing* 72 (March). 114–32

▪ Relationship with suppliers

The relationship with suppliers and supply chain management is also a field which has a tremendous impact on company success and firm value. Therefore there are a lot of studies regarding this subject in recent works.

A survey of Western European firms reveals that sustainable supplier co-operation generally has a positive impact on firm performance and investments in sustainability, for example through sustainable supplier co-operation does indeed result in effective returns.^{48 49} The disintegration of vertically integrated value chains into globally dispersed supply chains has led to a greater appreciation of the purchasing and supply management (PSM) function as a source of competitive advantage.^{50 51} Consequently, supply chain management has become a foremost area of successful business management in general, pointing out its significant impact on company value. Scholars have found empirical support for the link between supply management proficiency and the company's economic performance^{52 53} in particular due to the significant economic benefits earned from effective management of buyer–supplier relationships.⁵⁴ “Resources must be valuable, rare, imperfectly imitable and imperfectly substitutable to provide a source of competitive advantage^{55 56} firms succeed only through the acquisition of scarce and valuable resources.”⁵⁷ “Access to these strategic resources is limited, as is ex ante knowledge about their quality.^{58 59} If a firm can acquire better resources than its

⁴⁸ Hollos, D., Blome C., & Foerstl, K. (2012). Does sustainable supplier cooperation affect performance? Examining implications for the triple bottom line. *International Journal of Production Research*, 50(11), 2968-2986. pp. 1-19

⁴⁹ Taylor & Francis (2012). *International Journal of Production Research* (Vol. 50, No. 11)

⁵⁰ Carter, J.R. & Narasimhan, R. (1996). Is purchasing really strategic? *International Journal of Purchasing & Materials Management* 32 (1), 20–28

⁵¹ Krause, D.R., Pagell, M., & Curkovic, S. (2001). Toward a measure of competitive priorities for purchasing. *Journal of Operations Management* 19 (4). 497–512

⁵² Cousins, P.D., Lawson, B., & Squire, B. (2006). An empirical taxonomy of purchasing functions. In: *International Journal of Operations and Production Management* 26 (7). 775–794

⁵³ Gonzalez-Benito, J. (2007). A theory of purchasing's contribution to business performance. *Journal of Operations Management*, 25 (4). 901–917

⁵⁴ Narasimhan R. & Das, A. (2001). The impact of purchasing integration and practices on manufacturing performance. *Journal of Operations Management*, 19. 593–609

⁵⁵ Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17 (1). 99–120

⁵⁶ Amit, R. & Schoemaker, P.J.H. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14 (1). 33–46

⁵⁷ Pfeffer, J. & Salancik, G.R. (1978). *The external control of organizations: a resource dependence perspective*. New York: Harper and Row

⁵⁸ Barney, J. B. (1986). Strategic factor markets: Expectations, luck and business strategy. *Management Science* 32 (10). 1231–1241

⁵⁹ Dierickx, I. & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science* 35 (12). 1504–1511

competitors, it gains a competitive advantage.”⁶⁰ ⁶¹ The resource dependence theory (RDT) also uses resources to explain firm performance.⁶² It can be stated that firms are open systems that depend on the external environment but work to reduce their environmental uncertainty and dependence on suppliers. Therefore, they try to ensure their access to critical resources, especially in competitive environments and when resources are limited.⁶³ Closer relationships with suppliers increase interdependence and improve firm performance.⁶⁴ ⁶⁵ In sum, also the relationship of companies with their suppliers strongly contributes to their business success.

▪ **Overall market and industry situation and financial authorities**

The overall market and industry situation and financial authorities have also a high impact on firm success and therefore on company value. In our economies the government collects taxes and distributes transfer payments to the public. In addition, the government is the sole agency permitted to issue money. Focusing the effects of corporate taxation has been investigated in several studies. It can be concluded that the tax system introduces a market imperfection that affects the value of firms⁶⁶. In 1969 Hamada⁶⁷ and Rubinstein⁶⁸ analyzed the tax effects on the value of the firm, finding out that there is a quite strong relationship. The format of taxes and kind of taxes were analyzed by Miller⁶⁹ by differentiating between personal as well as corporate taxes in his study. “Tax policies also have an impact on the location of economic activity and are generally a small but statistically significant determinant of economic activity.”⁷⁰ ⁷¹ In addition to tax policies, states are also able to influence the level

⁶⁰ Peteraf, M.A. (1993). The cornerstone of competitive advantage: A resource-based view. *Strategic Management Journal* 14 (3). 179–191

⁶¹ Makadok, R.J. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal* 22 (5). 387–402

⁶² Hillman, A.J., Withers, M.C. & Collings, B.J. (2009). Resource dependence theory: a review. *Journal of Management* 35 (6). 1404–1427

⁶³ Banaszak-Holl, J., Zinn, J.S. & Mor, V. (1996). The impact of market and organizational characteristics on nursing care facility service innovation: a resource dependency perspective. *Health Service Research* 31 (1). 97–117.

⁶⁴ Aiken, M. & Hage, J. (1968). Organizational interdependence and intra-organizational structure. *American Sociological review* 33 (6). 912–930

⁶⁵ Pfeffer, J. & Salancik, G.R. (1978). *The external control of organizations: a resource dependence perspective*. New York: Harper and Row

⁶⁶ Modigliani, F. & Miller, M.H. (1963). Corporate Income Taxes and the Cost of Capital, A Correction. *American Economic Review* 53 (June 1963). pp. 433-443

⁶⁷ Hamada, R.S. (1969). Portfolio Analysis, Market Equilibrium and Corporation Finance. *Journal of Finance* 2i (March 1969). pp. 13-31

⁶⁸ Rubinstein, M.E. (1973). A Mean-Variance Synthesis of Corporate Financial Theory. *Journal of Finance* 2& (March 1973). pp. 167-181

⁶⁹ Miller, M.H. (1977). Debt and Taxes. *Journal of Finance* 32 (May 1977). pp. 261-275

⁷⁰ Bartik, T. J. (1991). *Who Benefits from State and Local Economic Development Policies?* Kalamzoo, MI: Upjohn Institute

⁷¹ Wasylenko, M. (1997). Taxation and economic development: the state of the economic literature. *New England Economic Review* (March/April). 37–52

of economic development through spending policies.⁷² After reviewing the literature, it can be concluded that there is a positive relationship between government spending (primarily on transportation and public safety) and economic development of states. Other determinants of economic growth are also energy prices and wage rates which are included in state policy variables and have an impact on firm success.⁷³

Besides the public and financial authorities the overall market and industry situation plays an important role for the economy and firm success. Schumpeter,⁷⁴ Knight⁷⁵ and Baumol⁷⁶ emphasized the importance of entrepreneurship to economic development. Especially in times of crisis or economic decline the impacts on company value are tremendous. In these periods firms need to retrench to compete, or even to survive.^{77 78 79 80 81} Environmental turbulence generates important sets of contextual factors, each with differing impacts on company strategic direction⁸² and how to deal with it. Such turbulences include impending reductions and shortages, losses of markets and market share to foreign competitors⁸³ or general economic decline.^{84 85 86 87} According to the relevant business and economic literature and findings it can be stated that the overall market and industry situation and the “behavior” of financial authorities have a tremendous impact on companies` success. Especially those areas are mainly dominated by external factors (i.e. governments, financial institutions etc.), leaving the individual company with little or no influence on this field.

⁷² Fisher, R. (1997). The effects of state and local public services on economic development. *New England Economic Review* (March/April). 53–67

⁷³ Bruce, D. & Deskins, J. (2006). *Can State Tax Policies Be Used to Promote Entrepreneurial Activity?* Working Paper. Knoxville, TN: University of Tennessee

⁷⁴ Schumpeter J. A. (1911). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press

⁷⁵ Knight F. H. (1921). *Risk, Uncertainty and Profit*. Boston, MA: Hart, Schaffner & Marx. Houghton Mifflin Co.

⁷⁶ Baumol, W.J. (1968). Entrepreneurship and economic activity. *American Economic Review Paper and Proceedings* 58. 64–71

⁷⁷ Alevras, J. & A. Frigeri (1987). Picking up the Pieces after Downsizing. *Training and Development Journal* (September). 29-31

⁷⁸ Appellbaum, S., Simpson, R. & Shapiro, B. (1987). The Tough Test of Downsizing. *Organization Dynamics* 16. 68-79

⁷⁹ Bailey, G. & Szerdy J. (1988). Is there Life after Downsizing? *Journal of Business Strategy* 9 (1). 8-11

⁸⁰ Bibeault, D, G. (1982). *Corporate Turnaround: How Managers Turn Losers Into Winners*. New York: McGraw- Hill

⁸¹ Boyle, R. & Desai H. (1991). Turnaround Strategies for Small Firms. *Journal of Small Business Management* 29 (5). 33-43

⁸² Hamel, G. & Prahalad, C.K. (1994). *Competing for the Future*. Boston, Mass.: Harvard Business School Press

⁸³ Cameron, K., Sutton, R. I. & Whetton, D.A. (1988). Issues in Organizational Decline. In: *Readings in Organizational Decline*

⁸⁴ Ewaldz, D. (1990b). Managing in an Economic Downturn. *Small Business Reports* 15 (12). 20-25

⁸⁵ McCallum, J. S. (1991). Perspectives For Managers On Recession. *Business Quarterly* 55 (4). 34-39

⁸⁶ Touby, L. A. (1991). Eight Lessons from the Bad Times for the Good Times: Finding a Business Edge that Works Before, During, and After a Recession. *Working Woman* 16 (12). 40- 44

⁸⁷ Want, J. (1990). Managing Business Change Cycle. *ABA Banking Journal* 82 (4).78-81

Multiple cause-effect function of performance factors and company value

Concerning the intensive practical and academic discussion about the decisive influencing factors of business performance and business success the author can also refer to the study of Bauer, Neumann and Lange with the title “Effects of employee satisfaction: An empirical study exemplified by the automotive retail industry”⁸⁸. The aim of the dissertation was to identify the determining factors for and the consequences of employee satisfaction in the context of a structural equation model, also including variables like organisational trust and company image, and their impact on company success.⁸⁹

Taking into account that all those influencing variables listed above have an impact on company value as the dependent variable the author formulates the following model for a theoretical multiple regression function, pointing out the cause-effect-relation between the performance factors and company success:

Formula 1.1: Theoretical standard regression function

$Y = a + b x_1 + c x_2 + d x_3 + e x_4 + f x_5 + \lambda$ standard function, with the following components:

a =	regression constant
$b x_1 =$	employee satisfaction
$c x_2 =$	marketing efficiency
$d x_3 =$	product portfolio and quality, innovation and technological standards
$e x_4 =$	relationship with suppliers
$f x_5 =$	overall market and industry situation and financial authorities
$\lambda =$	residual (non-specifiable other impact factors)
Y =	company value as the dependent variable

Source: Brenninger, Neuert (2014)

Due to the fact that our following empirical research concentrates on the independent variable employee satisfaction, by keeping the other independent variables *ceteris paribus*, the author can formulate the following specific regression function:

Formula 1.2: Theoretical regression function

$$Y = a + b x_1 + \varepsilon$$

$\varepsilon =$ residual: other impact variables, kept *ceteris paribus*

Source: Brenninger, Neuert (2014)

⁸⁸ Bauer, H.H., Neumann, M.M. & Lange, M.A. (2004). Effects of employee satisfaction: An empirical study exemplified by the automotive retail industry. Univ. Mannheim, Inst. für Marktorientierte Unternehmensführung. pp. 5-28

⁸⁹ Bauer, H.H., Neumann, M.M. & Lange, M.A. (2004). Effects of employee satisfaction: An empirical study exemplified by the automotive retail industry. Univ. Mannheim, Inst. für Marktorientierte p. 5-28

The corresponding statistical analysis is conducted in the course of the empirical investigation.

1.2. Basic research question: Employee satisfaction has an impact on the level of company value

Science and literature offer different aspects to show reliance between employee's satisfaction, motivation, customer satisfaction and company value. Company managers usually cannot influence circumstances in the environment, but they can influence conditions inside the company. One of the most important factors is the human resources. How content are employees with their working conditions? What kind of emotional climate does one have in the group? Leadership style seems to be an important factor that determines whether activities are successful or not. Science supports this theory. For example Lutz v. Rosenstiel⁹⁰ or Fredmund Malik⁹¹ argues that there is a very strong connection between those factors. One can find further details in literature cited in the attached bibliography. In summary, motivation and output are strongly related. But it seems to be important not only to concentrate on the motivation factor, but also on the bigger field of Corporate Social Responsibility (CSR). CSR is not yet well defined in a corporate definition and in the scientific literature no universally accepted definition. Therefore the definition used in this work is the definition in the CSR-Grünbuch of the European Commission contained in the ISO Norm 26000.⁹² "Precursor in the development of corporate social responsibility (CSR) is mainly driven by large companies, but also all types of companies – public and private, including SMEs and cooperatives – are already socially responsible." This definition says: "CSR is a concept which gives firms the base to integrate voluntarily social themes and environment themes in their business activities and to have a correlation with stakeholders." This means, that business units do more social activities as they are forced to do because of legal conditions. The factor voluntary has an immense importance in their activities. Those actions are not the same like NGO or NPO operations. They have to be seen as a kind of management tool.

Another definition is done by Wayne Visser (Founder and Director of CSR International, Adjunct Professor in Corporate Responsibility at La Trobe University in Australia, a Visiting Professor in Sustainability at Magna Carta College, Oxford, and Senior Associate at the

⁹⁰ Rosenstiel von, L. (2003). Motivation managen. Weinheim, Basel, Berlin: Beltz Verlag. pp. 52

⁹¹ Malik, F. (2006). Führen, Leisten, Leben. Frankfurt / New York: Campus Verlag. pp. 65

⁹² Commission of the European Community / Amt für Amtliche Veröffentlichung der Europäischen Gemeinschaften (2001). Grünbuch – Europäische Rahmenbedingungen für die soziale Verantwortung der Unternehmen. Brüssel KOM(2001). 366

University of Cambridge Programme for Sustainability Leadership): “CSR is the way in which business consistently creates shared value in society through economic development, good governance, stakeholder responsiveness and environmental improvement. Put another way, CSR is an integrated, systemic approach by business that builds, rather than erodes or destroys, economic, social, human and natural capital”.⁹³ Therefore CSR can be an important point of view in this research. The outcome can influence the internal climate and the stakeholders. Some of them are more inside a company and some are more for the environment. This research watches more the internal activities how the staff is treated and its influence in being satisfied with the working situation, motivation and output. External stakeholders will be less interesting. If one calls the personnel also stakeholder then one speaks about internal stakeholder.

Fundamental is the “Triple Bottom Line”. The Triple Bottom Line defines the three pillar approach as a “concept”, which assumes that the overall performance of a company should be judged by the extent to which it contributes to economic prosperity, environmental quality and social capital. Even the higher-ranking objective of sustainable development is taken into account these three dimensions of economic, environmental and social issues. The economic dimension of this is aimed at long-term incomes from existing resources, the ecological dimension to the careful use of these resources and nature in general and the social dimension of the distribution of justice, i.e. an “intra- and intergenerational equity” approach, which talks about three relevant elements: Society, Economy and Ecology. These elements are interleaved and there exists a strong dependency.

This work will have its focus in human resource activities and what influence they have on the company value. Even the question if there is any remarkable influence or not, will be worked out. Motivation, management leadership styles and their influence on employee satisfaction and equity value will be one of the central factors of investigation. There is an evident problem to research with a high relevance especially in times of war for talents for every company in the market. For this research - as mentioned before - there is a broad range of literature especially in the field of motivation, employee satisfaction, leadership and company value⁹⁴. “... on the other hand, empirical evidence suggests the contrary of the high importance of employees for the company’s success.”⁹⁵ “Because of the deficit of external

⁹³ Visser, W. (2011). The Ages and Stages of CSR: Towards the Future with CSR 2.0, CSR International Paper Series, No. 3. First published in Social Space 2011

⁹⁴ Wünsche, C. (2009). Die Auswirkungen von Management Audits auf den Unternehmenswert. Handlungsempfehlungen für ein verbessertes Value Reporting. München: Grin Verlag (1. Auflage). pp. 19

⁹⁵ Holtbrügge, D. (2007). Personalmanagement. Berlin / Heidelberg: Springer-Verlag GmbH (Auflage 2). pp. 12-36

information the value of human capital is often underestimated.” Numerous studies and articles^{96 97 98 99} support the idea that there exists a link between employee satisfaction and customer satisfaction, leadership, productivity and financial results. In summary, the main hypothesis of the dissertation is:

“Employee satisfaction has an impact on the level of company value”

The main interest of this work lies in the field of clearing possibilities of optimization processes, leadership, organizational culture and behavior and the proof if there is any direct or no direct connection to increasing or rising company value. The situation in the market does not allow ignoring any efforts one can reach, because competition pressure is strong and margin of profit gets steadily smaller. To be successful one cannot ignore any chance to get better. Even as the internal working atmosphere has a strong influence on the external performance at the customers¹⁰⁰. „On the one hand, the value of human capital is often underestimated because of the deficit of external information but otherwise the human capital is mostly less enough company-controlled by the success criteria, which are externally in the visual focus...” “Below value ... denotes not solely the financial contribution of its employees to the company’s value, but also the overall benefit they donate to their company.” In this research process different assumptions will built the basic of the study and should be audited during the research process in this dissertation.

1.3. Literature review to basic determinants of employee satisfaction

In this chapter reasons and methods for employee and job satisfaction will be analyzed by literature review. First the literary supplements, which will be extended during the work, as it is necessary in the context, have to be analyzed. These authors and their theories and works will build the theoretic base of the work. Psychology systems, organizational culture and behavior, updates und upgrades and learning organizations are the main themes and on these the statements will concentrate. In the 1980s for example Morgan introduces "Imaginization" as a new way of thinking and organizing. In his book “Images of Organization” Morgan introduces the use of metaphors to understand and deal with organization problems, describing the organization as machines, organisms, brains, cultures, political systems,

⁹⁶ Hinterhuber H. (1990). Wettbewerbsstrategie. Berlin, New York: DeGruyter (2. Auflage). p. 50

⁹⁷ Kölb, C. (2009). Konzeption eines Kennzahlensystems für das strategische Personalcontrolling, EFQM-Modell, Scandia Navigator. Hamburg: Verlag Diplomica. pp. 38-39

⁹⁸ Baldrige, M. Natural Quality Award. Australian Quality Award. <http://www.enotes.com/management-awards-reference/management-awards>

⁹⁹ Wissensbilanzen (2009). Great Place to work - study. Innsbruck: Universität Innsbruck

¹⁰⁰ Heidecker, M. (2003). Wertorientiertes Human Capital Management, Zur Steigerung des Unternehmenswertes durch die Personalarbeit. Wiesbaden: Deutscher Universitätsverlag (Auflage 1). pp. 52 -74

psychic prisons, flux and transformation, and instruments of domination. These metaphors are not meant to be exhaustive and he acknowledges that they can be used individually or in combination to guide our understanding of organizations and organization problems. His aim is to show how metaphor is central to our thinking about organization and management and open new possibilities.¹⁰¹ This is further explored in Morgan's book "Imaginization"¹⁰². Those items will be focused in theory and compared with theories of the development of company value. Science and literature offer different aspects to show reliance between leadership style, employee's satisfaction, motivation, customer satisfaction and company value. Also aspects like culture, mentality or the time we are living in should be regarded carefully. In his book "Productive Workplaces" Marvin Weisbord introduced a "Learning Curve" regarding the different management or leadership styles over the last century. Starting in the 19th Century with "Experts solving Problems" (Taylorism) to the 1950's with new insights into group dynamics, leading to the second point on the "Learning Curve", "Everybody solving Problems". Only a decade later organization designers started to catch on to biologist Ludwig von Bertalanffy's paradigm-shifting concept, general systems theory. This concept made possible previously unthinkable practices for improving workplaces, taking into account everything. Taylor knew and a lot of things he never thought of, like "environmental demands," "negative entropy," and "equifinality." The third point on the "Learning Curve" "Experts Improving Whole Systems" added significant sophistication to the practice of participative management, putting economics and technology right back up there with human relations. Now in the beginning of the 21th century the fourth milestone on his curve "Getting Everybody Improving the Whole System" is relevant.¹⁰³

There exists a thesis that increasing customer satisfaction depends on high motivated employees and staff motivation is based on satisfaction with their working circumstances and conditions.¹⁰⁴ Heidecker also proposes this position very clear in his work.¹⁰⁵

Also Margaret Wheatley states very clear in her book: "We have forgotten many important truths about human motivation. Study after study confirms that people are motivated by work that provides growth, recognition, meaning, and good relationships. We want our lives to mean something; we want to contribute to others; we want to learn; we want to be together.

¹⁰¹ Morgan, G. (1986). *Images of Organization* (1st ed.) Beverly Hills, CA: Sage

¹⁰² Morgan, G. (1993a). *Imaginization: The Art of Creative Management*. Newbury Park, CA: Sage,

¹⁰³ Weisbord, M. (2005 April). *Organization Design Forum. Techniques to Match to Our Values*. San Francisco

¹⁰⁴ Holtbrügge, D. (2007). *Personalmanagement*. Berlin / Heidelberg: Springer-Verlag GmbH (Auflage 2). pp. 12-36

¹⁰⁵ Heidecker, M. (2003). *Wertorientiertes Human Capital Management, Zur Steigerung des Unternehmenswertes durch die Personalarbeit*. Wiesbaden: Deutscher Universitätsverlag (Auflage 1). pp. 52 -74

And we need to be involved in decisions that affect us. If we believed these studies and created organizations that embodied them, then work would be far more productive and enjoyable.”¹⁰⁶ In the first part, the author wants to point out the most relevant issues which are responsible for employee or job satisfaction and will start with analyzing the different leadership styles, their managerial implications and the influence on employees and processes.

1.3.1. Leadership and management styles

The leadership style and its influence on job satisfaction are evident. The leadership style is the basis of creating an environment in which employees are satisfied and like to work. Depending on the type of manager there are different leadership styles which fit more or less to each person. The leadership style has a tremendous effect on the working environment and the behavior of the employees. The Centre for Leadership Studies did a Review about leadership styles in May 2003. In this review they compared different leadership styles and their effects on leading or managing.

Leadership styles

A review of the leadership literature reveals an evolving series of “schools of thought” from “Great Man” and “Trait” theories to “Transformational” leadership. Whilst early theories tend to focus upon the characteristics and behaviors of successful leaders, later theories begin to consider the role of followers and the contextual nature of leadership.¹⁰⁷ The following paragraphs should give an overview of these different leadership styles and their effects in treating or managing employees.

¹⁰⁶ Wheatley, M. (2005). *Finding our Way: Leadership for an Uncertain Time*. San Francisco: Berrett-Koehler. p. 151

¹⁰⁷ Bolden, R., Gosling, J., Marturano, A. & Dennison, P. (2003). Centre for Leadership Studies, University of Exeter. Crossmead, Barley Lane, Dunsford Hill, Exeter EX4 1TF, United Kingdom. pp. 6-24

Table 1.1: Leadership styles

Great man theories	The Great Man Theories are based on the belief that leaders are exceptional people born with innate qualities and destined to lead. The use of the term “man” was intentional since until the later part of the twentieth century leadership was thought of as a concept which is primarily male, military and western. This led to the next school of “Trait Theories”.
Trait theories	The lists of traits or qualities associated with leadership exist in abundance and continue to be produced. They draw on virtually all the adjectives in the dictionary which describe some positive or virtuous human attribute, from ambition to zest for life.
Behaviorist theories	These concentrate on what leaders actually do rather than on their qualities. Different patterns of behavior are observed and categorized as “styles of leadership”. This area has probably attracted most attention from practicing managers.
Situational leadership	This approach sees leadership as specific to the situation in which it is being exercised. For example, whilst some situations may require an autocratic style, others may need a more participative approach. It also proposes that there may be differences in required leadership styles at different levels in the same organization.
Contingency theory	This is a refinement of the situational viewpoint and focuses on identifying the situational variables which best predict the most appropriate or effective leadership style to fit the particular circumstances.
Transactional theory	This approach emphasizes the importance of the relationship between leader and followers, focusing on the mutual benefits derived from a form of “contract” through which the leader delivers such things as rewards or recognition in return for the commitment or loyalty of the followers.
Transformational theory	The central concept here is change and the role of leadership in envisioning and implementing the transformation of organizational performance.

Source: Bolden, R., Gosling, J., Marturano, A. & Dennison, P. (2003). Centre for Leadership Studies, University of Exeter. Crossmead, Barley Lane, Dunsford Hill, Exeter EX4 1TF, United Kingdom. pp. 6-24

From “great man” to “transformational” leadership

Each of these theories takes a rather individualistic perspective of the leader, although a school of thought gaining increasing recognition is that of “dispersed” leadership. This approach, with its foundations in sociology, psychology and politics rather than management science, views leadership as a process that is diffuse throughout an organization rather than lying solely with the formally designated “leader”. The emphasis thus shifts from developing “leaders” to developing “leaderful” organizations with a collective responsibility for leadership.

The list below shows the main leadership traits and skills identified by Stogdill in 1974.¹⁰⁸

¹⁰⁸ Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press. pp. 613

Table 1.2: Main leadership traits and skills identified by Stogdill in 1974

Traits:	Skills:
<ul style="list-style-type: none"> ▪ Adaptable to situations ▪ Alert to social environment ▪ Ambitious and achievement-orientated ▪ Assertive ▪ Cooperative ▪ Decisive ▪ Dependable ▪ Dominant (desire to influence others) ▪ Energetic (high activity level) ▪ Persistent ▪ Self-confident ▪ Tolerant of stress ▪ Willing to assume responsibility 	<ul style="list-style-type: none"> ▪ Clever (intelligent) ▪ Conceptually skilled ▪ Creative ▪ Diplomatic and tactful ▪ Fluent in speaking ▪ Knowledgeable about group task ▪ Organized (administrative ability) ▪ Persuasive ▪ Socially skilled

Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press. pp. 613

→ The different types of leadership styles need different skills and traits for a successful approach.

The author worked till today for about 25 years in different organizations and in different positions. During this time he met a lot of different leaders and realized the different opportunities or disadvantages of their leadership styles. The following paragraphs should describe what the author realized in his work life and is based on literature research and his personal experience.

Autocratic leader “dictator”

The autocratic leadership style is an “antiquated” leadership style.

The “dictator” does not accept a different opinion besides him and has the persuasion that only he himself is the standalone knowledge owner all “over the world”. He does not accept any opinion besides him and believes that only he knows everything best.

Table 1.3: Character of autocratic leader “dictator”

<p>These leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Persuasive ▪ Dominant ▪ Persistent ▪ Decisive ▪ Self-confident ▪ Mostly not diplomatic and tactful Assertive 	<p>→ This leadership style often leads to demotivation and a lower commitment or willingness to perform of the staff. The employees tend to work not autonomously and the self-motivation is rather low. The staffs mostly obey to the given tasks and their mental activity for improvement is depressed. They mostly just do what they are told and work to the rules.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Bureaucratic leadership style “by the book”

The bureaucratic leadership style is used almost everywhere. Often this leadership style can be seen in public companies like local authorities, municipalities or also in big companies especially in controlling or organizational departments. These leaders obey the rules and expect this from their employees, too.

Table 1.4: Character of bureaucratic leadership style “by the book”

<p>These leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Organized (administrative ability) ▪ Informed about the rules ▪ Not willing to assume responsibility ▪ Not ambitious and achievement orientated ▪ Knowledgeable about group tasks ▪ Dependable 	<p>→ This leadership style is also not motivation oriented and the employees often stuck in the middle. But there are a representative group of employees who like this leadership style because it is very predictable.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Charismatic leadership style “follow me”

This leadership style is commonly used but it depends completely on the “charismatic leader”. This leadership style cannot be learned or trained. These leaders need to have an individual natural charismatic ability. Employees receive high motivation power and will follow their leader.

Table 1.5: Character of charismatic leadership style “follow me”

<p>These leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Persuasive ▪ Fluent in speaking ▪ Creative ▪ Clever (intelligent) ▪ Adaptable to situations ▪ Ambitious and achievement orientated ▪ Willing to assume responsibility ▪ Decisive ▪ Energetic (high activity level) ▪ Self-confident 	<p>→ This leadership style mostly leads to high self-motivation of the staff and a charismatic leader is able to move a lot of things. In sales units it is a very suitable leadership style. Successful CEO`s of large companies also need this ability. Employees often “follow” these leaders even in unpopular situations or problematical decisions. In politics it is also very important to have this ability for convincing the voters of the different parties.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Democratic leadership style “participative”

The democratic or participative leadership style is a modern leadership style, useful for constructive, modern teams e.g. R&D departments. The democratic leader allows his teams to elaborate the solution and get a common result.

Table 1.6: Character of democratic leadership style “participative”

<p>These leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Conceptually skilled ▪ Diplomatic and tactful ▪ Knowledgeable about group tasks ▪ Tolerant of stress ▪ Socially skilled ▪ Cooperative ▪ Alert to social environment 	<p>→ This leadership style requires a lot of time, but the involvement of the team in the decisions is much deeper and leads to a high commitment of the staff and a self-dependent working atmosphere.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Laissez –faire leadership style “let it be”

In the authors opinion the Laissez-faire leadership style is a very “dangerous” one and only leads in small groups or organizations with very high educated and self-responsible staff to acceptable or good results. But often this style is practiced by weak leaders which are not able to give consequent and constructive feedback.

Table 1.7: Character of laissez –faire leadership style “let it be”

<p>These leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Diplomatic and tactful ▪ Not persuasive ▪ Not ambitious and achievement oriented ▪ Not well organized ▪ Cooperative ▪ Not energetic (low activity) 	<p>→ With a laissez-faire leadership style the leader often impresses disinterest or complacency about the tasks. This also leads to disinterest, low commitment or at the end phlegm in the staff.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

People- orientated leadership “relations-oriented”

The people orientated leadership style may be very motivating for the employees, because they feel like being in the center of attention. But the gap to come too close to feel as a friend is very small and this may lead to interest conflicts between company goals and individual interests.

Table 1.8: Character of people-orientated leadership “relations-oriented”

<p>These people-oriented leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Diplomatic and tactful ▪ Socially skilled ▪ Alert to social environment ▪ Tolerant to stress 	<p>→ The people-oriented leadership style often leads to a kind of friendliness where the border is very hard to keep. “Everybody’s darling is everybody’s fool”! The management attention should always focus on the company targets and goals and not on the person.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Servant leadership “support everyone”

The leadership style “support everyone” is also very tricky. It is not possible to support each individual of a big team in the same way. A servant leader can give a larger number of people the impression that everybody gets the same management attention. But the leaders

can only give the impression to support everyone. However, it is just not possible to give the same attention or support to everybody, because the day only has 24 hours.

Table 1.9: Character of servant leadership “support everyone”

<p>Servant leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Diplomatic and tactful ▪ Knowledgeable about group tasks ▪ Tolerant of stress ▪ Socially skilled ▪ Cooperative ▪ Alert to social environment ▪ Adaptable to situations ▪ Persuasive 	<p>→ This leadership style may bring a good motivation in the team and in the staff as long as the leader can convey the employees that he wants to support everyone. This leadership style requires a very high fairness from the leader and the staff.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Task-oriented leadership “get it done”

The task-oriented leadership style is appropriate for smaller mid-sized and large companies. Very imported with this leadership style is that the managers don’t forget the big picture.

Table 1.10: Character of task-oriented leadership “get it done”

<p>Task-oriented leaders mostly are:</p> <ul style="list-style-type: none"> ▪ Organized (administrative ability) ▪ Informed about the rules ▪ Willing to assume responsibility ▪ Often ambitious and achievement orientated ▪ Knowledgeable about group tasks ▪ Dependable 	<p>→ The task oriented leadership style often goes along with management by objectives. Here it is very important that the objectives are committed by the management and the staff. And therefore if the objectives are SMART (specific, measurable, attractive, reachable and terminable) and the tasks are clear it can be a very motivating environment for employees.</p>
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Source: Stogdill, R. (1974). Handbook of Leadership (1st Ed.). New York: Free Press

Covey¹⁰⁹ did a comparison of transactional and transformational leadership in 1992 shown in table 1.11. Therefore, the author will combine these theories with his experience.

¹⁰⁹ Covey, S. (1992) Principle-Centered Leadership. A Fireside book: Business. Free Press. p. 78

Table 1.11: Leadership Matrix by Covey

Transactional leadership “carrot and stick”	
<ul style="list-style-type: none"> ▪ Builds on man’s need to get a job done and make a living ▪ Is preoccupied with power and position, politics and perks ▪ Is mired in daily affairs ▪ Is short-term and hard data orientated ▪ Focuses on tactical issues ▪ Relies on human relations to lubricate human interactions ▪ Follows and fulfills role expectations by striving to work effectively within current systems ▪ Supports structures and systems that reinforce the bottom line, maximize efficiency, and guarantee short-term profits 	<p>The transactional leadership style is based on “action” and able to make things run in a very short time and rough way. For developing or evolving an inspiring company climate it is not very suitable.</p>
Transformational leadership “inspiring, communicative”	
<ul style="list-style-type: none"> ▪ Builds on a man’s need for meaning/importance ▪ Is preoccupied with purposes and values, morals, and ethics ▪ Transcends daily affairs ▪ Is orientated toward long-term goals without compromising human values and principles ▪ Focuses more on missions and strategies ▪ Releases human potential – identifying and developing new talent ▪ Designs and redesigns jobs to make them meaningful and challenging ▪ Aligns internal structures and systems to reinforce overarching values and goals 	<p>In the authors opinion, when comparing transactional and transformational leadership style there are more opportunities in the transformational leadership style, but always be aware not to get too highly sophisticated and to get both feet on the ground when necessary. That means it is good to develop employees in the long run but don’t forget short term tactics to achieve also the short and middle term goals!</p>

Source: Covey, S. (1992). Principle-Centered Leadership. A Fireside book: Business. Free Press. pp. 78

The advantages and disadvantages of a shift to a more “**participative**” style are:

Table 1.12: Advantage and disadvantages of a shift to a more participative style

Advantage:	Disadvantages:
<ul style="list-style-type: none"> ▪ More motivating for employees ▪ Better identification of the staff with company objectives and target ▪ A corporate elaboration of a strategy or a goal leads to a higher commitment of the employees ▪ In a participative leadership style environment is more space for research and development ▪ Ideas can be elaborated in an open space ▪ Managers and leaders are in closer touch to the employees and information 	<ul style="list-style-type: none"> ▪ Too much space for “laissez – fair” ▪ Needs more time? ▪ Sometimes no clear targets and objectives ▪ In times of crisis very difficult to handle ▪ Not adaptive for every organization e.g. military or police

Source: Covey, S. (1992) Principle-Centered Leadership. A Fireside book: Business. Free Press

Comparing the advantages and disadvantages of the shift to a more participative leadership style it is evident that in our modern community it is more appropriate and accepted in our daily working environment to involve people and get their commitment. Also

Marvin Weisbord stated in his paper “Techniques to Match to Our Values” the advantage of a participative Leadership Style.¹¹⁰ Based on a 1938 research study by Kurt Lewin, a refugee from Nazi Germany and a graduate student named Ronald Lippitt. Working with boys’ clubs at the State University of Iowa they documented the indisputable contrast between groups performing under authoritarian and democratic leadership. They invented the term “group dynamics”. They opened the door to remarkable organizational improvement strategies based on democratic leadership, group problem solving, and teamwork unknown a half century earlier.¹¹¹ In some cases, however, in a participative environment transactional steps or “top down” decisions are necessary for realizing quick wins or improving the company success. Good managers are aware of this issue and adapt their management or leadership style to the basic conditions they are in.

In the report “A Review of Leadership Theory and Competency Frameworks” Centre for Leadership Studies two models about management and leadership can be found: The “Hamlin’s Generic Model of Managerial and Leadership Effectiveness” and the “Zenger Miller Grass-Roots Leadership Model”.

Hamlin’s “Generic Model of Managerial & Leadership Effectiveness”

This model is based upon a meta-analysis of leadership and management behaviors in four UK public-sector organizations. It distinguishes between positive and negative indications of management and leadership.¹¹²

Positive indicators:

- Effective organization and planning/proactive management
- Participative and supportive leadership/proactive team leadership
- Empowerment and delegation
- Genuine concern for people/looks after the interests and development needs of staff
- Open and personal management approach/inclusive decision making
- Communicates and consults widely/keeps people informed

¹¹⁰ Weisbord, M. (2005 April). Techniques to Match to Our Values. Organization Design Forum. San Francisco. They are based on themes from Productive Workplaces Revisited: Dignity Meaning and Community in the 21st Century (Jossey-Bass/Wylie, 2004). pp. 4

¹¹¹ Weisbord, M. (2005 April). Techniques to Match to Our Values. Organization Design Forum. San Francisco. They are based on themes from Productive Workplaces Revisited: Dignity Meaning and Community in the 21st Century (Jossey-Bass/Wylie, 2004). p. 4

¹¹² Hamlin, R. (2002) Towards a Universalistic Model of Leadership: a comparative study of British and American empirically derived criteria of managerial and leadership effectiveness. Working paper WP005/02, University of Wolverhampton. Online at:
http://asp2.wlv.ac.uk/wbs/documents/mrc/Working%20Papers%202002/WP006_02_Hamlin.pdf

Negative indicators:

- Shows lack of consideration or concern for staff/ineffective autocratic or dictatorial style of management
- Uncaring, self-serving management/undermining, depriving and intimidating behavior
- Tolerance of poor performance and low standards/ignoring and avoidance
- Abdicating roles and responsibilities
- Resistant to new ideas and change/negative approach

The evaluation of the indicators also show a clear evidence how necessary it is to involve employees in the decision making process and to get a commitment of the staff also for unpopular decisions and strategies.

The results have been compared to the Zenger Miller Grass-Roots Leadership Model and used to argue for a universalistic model of leadership/management (Hamlin, 2002).

The Zenger Miller “Grass-Roots Leadership Model”

This model was developed from empirical research in which were collected 1,871 “critical incidents” from 450 US and Canadian organizations. The model below has been refined from the original Zenger Miller CLIMB strategies model.¹¹³

- Create a compelling future: Create and describe a vision, manager changes required to realize a vision
 - Let the customer drive the organization: Respond to identified customer needs
 - Involve every mind: Support individual effort, support team effort, share information, make decisions that solve problems, manage work horizontally, build personal credibility
 - Manage work horizontally: Manage cross-functional processes, display technical skills, manage projects, manage time and resources
 - Build personal credibility: Take initiative beyond job requirements, take responsibility for your own actions and the actions of your group, handle emotions in yourself and others.
- These two models describe very well an appropriate way of managing and leading people and companies. The author absolutely supports these theories and this positive “Leading-behavior” can often be found in successful, well managed and organized companies.

¹¹³ Hamlin, R. (2002) Towards a Universalistic Model of Leadership: a comparative study of British and American empirically derived criteria of managerial and leadership effectiveness. Working paper WP005/02, University of Wolverhampton. Online at:
http://asp2.wlv.ac.uk/wbs/documents/mrc/Working%20Papers%202002/WP006_02_Hamlin.pdf

→ In the authors opinion, a more participative style is more aligned with our community in the 21th century and our daily life and therefore companies will achieve better results with a more participative and communicative leadership-style. There is a lot of literature and research about this positive impact on employee satisfaction and the influence on company success.

Participative management and job satisfaction

As mentioned above comparing the different leadership styles, the most positive impact on employee satisfaction can be reached with a participative motivating leadership style. There is a lot of research regarding the positive impacts of a participative leadership style which also goes along with a high identification of the staff in company goals.

In the research “Participative Management and Job Satisfaction: Lessons for Management Leadership”, Soonhee Kim from the University of Nevada, Las Vegas, explores the relationship between participative management in the context of strategic planning and job satisfaction in local government agencies. This study examined the positive relationship between participative management and job satisfaction. It also points out the positive relationship between a participative strategic management process and job satisfaction. Furthermore, the study emphasizes effective supervisory communications as a factor affecting employee satisfaction. The evaluation of this research shows a clear evidence how necessary it is to involve employees in the decision making process and to get a commitment of the staff also for unpopular decisions and strategies. Besides all limitations and directions for further research, it seems evident that participative management and participative planning processes have a positive effect on job satisfaction.¹¹⁴

Marvin Weisbord emphasized in his paper “Techniques to Match to Our Values” the importance of a participative Leadership Style. He pointed out that it is necessary to add significant sophistication to the practice of participative management, putting economics and technology right back up there with human relations.¹¹⁵ “It is very important to involve employees by improving the whole system.” For involving “every mind and brain” to improve the whole systems it is necessary to share information, involve the staff in decision making processes and at the end make decisions which solve problems. This goes along with

¹¹⁴ Soonhee, K. (2002). Public Administration Review, March/April 2002, Vol. 62, No.2. Las Vegas: University of Nevada. pp. 231-237

¹¹⁵ Weisbord, M. (2005 April). Organization Design Forum. Techniques to Match to Our Values. San Francisco

managing work more horizontally than vertically. For improving the whole system it is also very important to build personal credibility, which leads at last to more employee satisfaction. Also in his paper “Requiem for Bethlehem -The Company Went Broke – The Learning Was Priceless” ways of going to a more collaborative workplace were elaborated.¹¹⁶ Weisbord worked out that the involvement of each individual combined with supporting individual efforts and team performance has a high impact on employee satisfaction and on the personal identification of the employees with the firm.

Besides leadership and management styles there are a lot of other factors influencing employee satisfaction.

1.3.2. Workplace environment

Job design and skill utilization

In the paper “Job design, opportunities for skill utilization, and intrinsic job satisfaction” David Morrison, John Cordery, Antonia Girardi, and Roy Payne from the University of Western Australia, Crawley, Australia made a theoretical framework, linking the key job characteristics of perceived control and perceived cognitive demand to perceived skill utilization and intrinsic job satisfaction.¹¹⁷

Results from one cross-sectional study and one longitudinal study which are presented and reported, support the meditational influence of perceived skill utilization on the perceived job control and job satisfaction relationship only. The relationship between perceived job demand and perceived skill utilization was mixed but no mediating effect was evident. It is argued that the level of both perceived demand and perceived control dictates the nature of the joint influence of both job characteristics on perceived skill utilization and work attitudes such as job satisfaction.

Work-role input vs. work-role output

In the paper “Well-being at work: a cross- national analysis of the levels and determinants of job satisfaction”,¹¹⁸ Alfonso Sousa-Poza and Andres A. Sousa-Poza analyze the levels and determinants of job satisfaction in a cross-national setting. By using a bottom-up psychological model, in which they compare work-role inputs (e.g. effort, education,

¹¹⁶ Weisbord, M. (2010). *Improving Performance in the Workplace*. San Francisco: Pfeiffer/John Wiley. Volume 43, Number 5

¹¹⁷ Morrison, D., Cordery, J., Girardi, A. & Payne R. (2005). Job design, opportunities for skill utilization, and intrinsic job satisfaction. *European Journal of Work and Organizational Psychology* 14 (1). pp. 59-79

¹¹⁸ Sousa-Poza, A. & Sousa-Poza A. (2000). Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction. *Journal of Socio-Economics* 29 . pp. 517-538

working time) with work-role outputs (e.g. pay, fringe benefits, status) the paper tried to explain cross-national differences. In their investigation they tried to explain why job satisfaction levels differ in the considered countries. The main contribution of this paper was to show that job-satisfaction levels differ across countries and that these differences can be partially attributed to differences in work-role inputs and outputs. Furthermore, they showed that there are some determinants of job satisfaction that apply to all countries (namely, having an interesting job and good relations with management) and others that are country specific (such as pay and job security).

The main results were:

- Workers in all countries are quite satisfied.
 - Denmark was the country with the highest job satisfaction level. The USA was ranked seventh, Germany thirteenth, Great Britain fifteenth, Japan nineteenth and Russia twentieth.
 - A comparison with the 1989 ISSP (International Social Survey Program) data set reveals that job satisfaction has declined in Germany and the USA in the 1990s.
 - Countries with high work-role outputs, in general had a high job-satisfaction ranking, and vice versa.
 - Having an interesting job and having good relations with the management are the two most important work-role inputs and having an exhausting job is the most important work-role input.
 - Workers in eastern European countries tend to value high income.
- Managerial implications: With the increased importance of multinational companies it is mandatory for managers that they know how job satisfaction can be influenced in different cultures and how to deal with it.¹¹⁹

People-related total quality management

Another very interesting approach is “The effect of people-related TQM practices on job satisfaction: a hierarchical model”. In this paper Daniel I. Prajogo and Brian K. Cooper Department of Management, Monash University, Caulfield, VIC 3145, Australia presents the findings of a study which examined the relationship between people-related elements of total

¹¹⁹ Sousa-Poza, A. & Sousa-Poza A. (2000). Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction. *Journal of Socio-Economics* 29 . pp. 517-538

quality management (TQM) practices and employees' job satisfaction.^{120 121} By using structural equation modelling (SEM), TQM was operationalized as a second-order latent variable measured by five first-order factors (top management commitment, empowerment, training, involvement and teamwork) and job satisfaction was also operationalized as a second-order latent variable measured by two first-order factors (internal work satisfaction and high growth satisfaction). The findings support the validity of modelling TQM as a hierarchical, second-order latent construct and demonstrate its strong relationship with job satisfaction. This study highlights the importance of people related aspects of TQM in predicting job satisfaction. This study differentiates itself from others on the similar topic in terms of the analytical method used which provides a stronger case for the holistic view of TQM practices in organizations. Total quality management (TQM) has been regarded as one of the most predominant sources of competitive advantage in the last two decades. Numerous studies have shown a positive relationship between TQM and organizational performance¹²²¹²³. Most studies have been directed towards examining the effect of TQM on operational performance and business performance. Nevertheless, there is still a need for rigorous studies in understanding the relationship between TQM and a broader set of organizational outcomes^{124 125}. Kaynak, H. (2003) and Shrivastava, R.L., Mohanty, R.R., Lakhe, R.R. (2006) attempted to contribute to this area by examining the relationship between TQM practices and employees' job satisfaction^{126 127}. Job satisfaction is defined as an evaluation of the extent to which people like or dislike their jobs^{128 129}. Employees' job satisfaction has been shown to be one of the key determinants of an organization's success

¹²⁰ Prajogo, D. I. & Brian C. K. (2010). The effect of people-related TQM practices on job satisfaction: a hierarchical model. Caulfield, VIC 3145: Australia Monash University

¹²¹ Taylor & Francis (2010 January). Vol. 21. No. 1. pp. 26-35

¹²² Flynn, B.B., Schroeder, R.G., Sakakibara, S. (1995). The impact of quality management practices on performance and competitive advantage. *Decision Sciences* 26 (5). pp. 659-691

¹²³ Powell, T.C. (1995). Total quality management as competitive advantage: a review and empirical study. *Strategic Management Journal* 16 (1). pp. 15-36

¹²⁴ Adam, E.E., et. al. (1997). An international study of quality improvement approach and firm performance. *International Journal of Operations and Production Management* 17 (9). pp. 842-873

¹²⁵ Samson, D. & Terziovski, M. (1999). The relationship between total quality management practices and operational performance. *Journal of Operations Management* 17 (4). pp. 393-409

¹²⁶ Kaynak, H. (2003). The relationship between total quality management practice and their effects on firm performance. *Journal of Operation Management* 21 (4). pp. 405-439

¹²⁷ Shrivastava, R.L., Mohanty, R.R., Lakhe, R.R. (2006). Linkages between total quality management and organizational performance: an empirical study for Indian industry. *Production Planning & Control* 17 (1). pp. 13-30

¹²⁸ Spector, P.E. (1997). *Job satisfaction – application, assessment, cause, and consequences*. Thousand Oaks, CA: Sage. pp. 35

¹²⁹ Saari, L.M., Judge, T.A. (2004). Employee attitudes and job satisfaction. *Human Resources Management* 43 (4). pp. 395-407

and growth¹³⁰. However, there is a paucity of studies that have examined the relationship between TQM and job satisfaction.

The study of Daniel I. Prajogo and Brian K. Cooper has shown two major findings. First, it confirms empirically the holistic nature of TQM practices, particularly those related to people. Specifically, their findings support the validity of modelling TQM as a hierarchically latent construct. Second, TQM practices (when modelled as a hierarchical construct) had a strong and positive relationship with job satisfaction, the latter capturing not only satisfaction with the work itself, but also personal development and growth. Notwithstanding the issues of inferring causality from cross-sectional data, the overarching conclusion from their study is that TQM practices can be effective in enhancing not only employees' satisfaction but also their personal development or growth, factors which are known from previous research to increase both job and organizational performance^{131 132}. While they do not claim that TQM is the only or the best management approach available, their research supports the use of people-related and TQM related practices to be incorporated as a model of the HR system in organizations. Of course, there are several HR practices which are not captured in this study, such as recruitment, selection, reward system and career development, which are associated with positive organizational outcomes^{133 134}. Firms need to align these practices with TQM principles. Daniel I. Prajogo and Brian K. Cooper acknowledged some limitations to their study. As noted in the research, it is difficult to draw causal inferences from their dataset. It is also possible that the relationship between people-related TQM and job satisfaction may have been affected by common method variance. One strategy for controlling potential common method biases is to obtain measures of the independent and dependent variables from different data sources¹³⁵. It is recommended therefore that future research should replicate the present findings using data gathered from multiple sources. For example, data on TQM practices could be gathered using reports from quality improvement managers who are in a

¹³⁰ Hallowell, R.L., Schlesinger, L.A., Zornisky, J. (1996). Internal service quality, customer and job satisfaction: linkages and implications for management. *Human Resources Planning* 19 (2). pp. 206-231

¹³¹ Harter, J.K., Schmidt, F.L., Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a metaanalysis. *Journal of Applied Psychology* 87 (2). pp. 268-279

¹³² Harrison, D.A., Newmann, D.A., Roth, P.L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal* 49 (2). pp. 305-325

¹³³ Campbell, D.J., Campbell, K.M., Chia, H.B. (1998). Merit pay, performance appraisal, and individual motivation : and analysis and alternative. *Human Resource Management* 37 (2). pp. 131-146

¹³⁴ Snell, S.A. et al. (2000). Selection and training for integrated manufacturing: the moderating effects of job characteristics. *Journal of Management Studies* 37 (3). pp. 445-466

¹³⁵ Podsakoff, P.M. et al. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88 (5). pp. 879-903

key position to observe their implementation. Another limitation of their study is the limited scope of organizational practices measured. As noted above, there are several HR practices which were not captured in this study, including recruitment/selection and reward system. Integrating these policies with TQM practices may enhance the ability to predict job satisfaction and related outcomes. Finally, another limitation of this study is that the relationship between TQM and job satisfaction was examined in a context free or “vacuum” environment. It is recommended that future research include a more comprehensive range of variables in models of the TQM-job-satisfaction-performance relationship, including relevant mediator and moderator variables. In conclusion, in terms of practical implications, their findings support the implementation of people related TQM as part of a strategy of creating “high performance“ workplace practices via the enhancement of employees’ job satisfaction. They believe that their findings are also instructive for organizations implementing the organizational practices captured in their study regardless of the banner they may use (e.g. TQM, continuous improvement, high-performance work practices) in order to develop a working environment which enhances job satisfaction and ultimately leading to improved organizational performance.

- Managerial implications: Managers who know how to implement people related TQM will have the opportunity to create high-performance work place practices while enhancing staff satisfaction.
- Implications for further research: Investigations about other HR practices like recruitment / selection and reward systems should be done.

1.3.3. Monetary compensation

Performance pay

Another very interesting approach is the influence of salary on job satisfaction. In the paper “Does Performance Pay Increase Job Satisfaction?” Colin Green and John S. Heywood from the Lancaster University and University of Wisconsin – Milwaukee and University of Birmingham investigated the influence of performance-related pay on several dimensions of job satisfaction. In cross-sectional estimates performance-related pay is associated with increased overall satisfaction, satisfaction with pay, satisfaction with job security and satisfaction with hours. It appears to be negatively associated with satisfaction with the work itself; yet, after accounting for worker fixed effects the positive associations remain and the negative association vanishes. These results appear robust to a variety of alternative

specifications and support the notion that performance-related pay allows increased opportunities for worker optimization and does not generally demotivate workers or crowd out intrinsic motivation.¹³⁶ The use of performance pay schemes by employers has been shown to increase workers' productivity, effort and earnings.¹³⁷¹³⁸¹³⁹ However, it remains unclear a priori what effect performance pay schemes have on worker satisfaction with the job. While increased earnings will increase worker satisfaction, other aspects of performance pay schemes may have less beneficial effects on job satisfaction. Pay schemes based on performance may introduce large variations in periodic earnings, reducing the utility of risk-averse workers. The performance monitoring associated with pay schemes may result in increased effort that workers dislike. While some types of performance pay (such as profit sharing) may increase job security, others will increase earnings dispersion within the firm and may reduce perceptions of fairness or lower morale and motivation. In this way, performance pay schemes may increase worker satisfaction with pay while reducing their satisfaction with other dimensions of the job, such as effort, risk or perceived fairness. This paper presents evidence on the impact of performance pay schemes on job satisfaction in the United Kingdom. Specifically, they used the British Household Panel Survey (BHPS) to investigate the impact of profit sharing, bonuses and performance pay on several dimensions of job satisfaction, including overall satisfaction and satisfaction with pay, with hours, with job security and with the work itself. The paper of Colin Green and John S. Heywood provides the first evidence of the influence of performance pay schemes on several of these different aspects of job satisfaction. In traditional cross-section estimates, they demonstrate that performance-related pay schemes are positively related to satisfaction with pay, to satisfaction with job security and to a lesser extent with satisfaction with hours and overall satisfaction. Performance-related pay schemes appear negatively related to satisfaction with the work itself. Next, they utilize the panel nature of the BHPS and demonstrate that controlling for individual fixed effects confirms the positive influences of performance pay. Including the fixed effects, profit sharing and/or performance pay remain associated with higher satisfaction overall, with pay, with job security and with hours. The negative influence on satisfaction with the work itself vanishes in the fixed effects estimates. A series of

¹³⁶ Green, C., Heywood, J. S. (2008). The London School of Economics and Political Science 2007. *Economica* 75. pp. 710–728

¹³⁷ Lazear, E.P. (2000). Performance pay and productivity. *American Economic Review*. Personal Economics, Cambridge, Mass: MIT Press 90. pp. 1346-61

¹³⁸ Paarsch, H., Shearer, B. (2000). Pieces rates, fixed wages, and incentive effects: statistical evidence from payroll records. *International Economic Review* 41. pp. 59-92

¹³⁹ Parent, D. (1999). Methods of pay and earnings: a longitudinal analysis. *Industrial and Labor Relations Review* 53. pp. 71-86

robustness checks confirm these general patterns but show that results vary by gender and by union status. This work expanded on previous research by investigating the role of performance pay in determining many separate dimensions of job satisfaction. Moreover, it uniquely controls for individual fixed effects when examining the dimensions of job satisfaction. Indeed, the only previous study using longitudinal data and fixed-effects estimates examined just overall satisfaction¹⁴⁰, even as the individual dimensions prove critical for examining competing hypotheses. This study is also unique in the extent to which subsamples are separately examined by gender, union status, presence of children and occupation. It is also novel in allowing interactions between performance-related pay and profit sharing. Colin Green and John S. Heywood have provided evidence that profit sharing/bonuses tend to increase overall job satisfaction. Moreover, performance-related pay increases satisfaction with both pay and job security. The latter finding is not necessarily intuitive. Performance-related pay may decrease job security in so far as it is indicative of a culture of monitoring work effort. Conversely, linking pay to productivity may increase job security as wages fluctuate positively with the output of the firm^{141 142}, reducing the need for firms to lay off workers in periods of weak product demand. It may also attract workers who are willing to tolerate risk and so are more likely to be satisfied with their degree of security. Their findings suggest that the latter two effects dominate. A concern with performance-related pay is that it can lead to work intensification¹⁴³, and this in turn may lead to dissatisfaction with hours worked. In this study they found no evidence of performance-related pay adversely affecting satisfaction with hours worked, even for low skilled workers whom it has been suggested are adversely affected by performance pay schemes. Indeed, in the fixed-effects estimates they found evidence of greater satisfaction with hours among those receiving performance pay. A related concern is that the explicit incentives of performance-related pay may crowd out intrinsic motivations. In the cross-section estimates there was, indeed, a suggestion that performance-related pay was associated with reduced satisfaction with the job itself. Yet the fixed-effects estimates revealed that this was the result of sorting, as the association did not persist. Thus, they remain unable to confirm any negative influences of performance pay on job satisfaction, and unable to dislodge a series of positive influences. Several caveats remain.

¹⁴⁰ Heywood, J.S., Wei, X. (2006). Performance pay and job satisfaction. *Journal of Industrial Relations* 48. pp. 523-40

¹⁴¹ Weitzman, M.L. (1984). *The Share Economy*. Cambridge, Mass.: Harvard University Press

¹⁴² Kruse, D.L. (1993). *Profit Sharing: Does it Make a Difference?* Kalamazoo, Mich: W.E. Upjohn Industrie

¹⁴³ Green, F. (2004). Why has work effort become more intense?. *Industrial Relations* 43, pp. 704-41

First, these general tendencies do not mean that the job satisfaction of all workers will increase should their firms adopt performance pay. By its nature, performance pay is suited for some types of production technologies and not for others. Thus, they emphasized in their early discussion that performance pay can, in some circumstances, be counter-productive and can decrease surplus¹⁴⁴. It makes sense that workers in such cases may not enjoy increased satisfaction. Indeed, they presented evidence hinting that the influence of performance pay on satisfaction may be less evident in service industries.

Second, other dimensions of job satisfaction may still present negative correlations. Satisfaction with management, co-workers or stress may all be lowered by performance pay. They simply do not have access to those dimensions in our data.

Finally, they recognize that their measures of performance pay may aggregate individual practices that have offsetting influences. Thus, piece rates may lower satisfaction even as earnings based on a broader formal appraisal increase satisfaction. They cannot identify whether or not such differences exist. Despite these caveats, the main suggestions that worker welfare will be reduced by performance pay received no support in their inquiry.

Firm size and performance pay

Another interesting research about performance pay was done by Benjamin Artz from the Department of Economics, University of Wisconsin, Milwaukee. “The Role of Firm Size and Performance Pay in Determining Employee Job Satisfaction”. Job satisfaction reflects the on-the-job utility of workers and has been found to influence both the behavior of workers and the productivity of firms. Performance pay remains popular and widely used to increase worker productivity and more generally align the objectives of workers and firms. Yet, its impact on job satisfaction is ambiguous. Whereas the increased earnings increase job satisfaction, the increased effort and risk decreases job satisfaction. This paper finds empirical evidence that on net performance pay increases job satisfaction but does so largely among union workers and males in larger firms.¹⁴⁵

A lot of research shows that performance pay schemes may increase job satisfaction in several ways. Certainly workers’ job satisfaction will increase as a result of increased earnings (Parent, 1999). In addition, employees may feel that performance pay creates a workplace that

¹⁴⁴ Freeman, R.B. & Kleiner, M.M. (2005). The last American shoe manufactures: decreasing productivity and increasing profits in the shift to continuous flow production. *Industrial Relations* 44. pp. 307-30

¹⁴⁵ Artz, B. (2008). Journal compilation © 2008 CEIS. Fondazione Giacomo Brodolini and Blackwell Publishing Ltd.. *LABOUR* 22 (2). pp. 315–343

rewards hard work and effort thus increasing job satisfaction (Brown and Sessions, 2003). Another positive effect is that workers may also find confidence, esteem, and self-worth in high-performance work organizations (HPWOs). These organizations usually include performance pay as an important element and it are generally small firms that promote shared decision making among management and typical employees. Bauer found out that workers in these organizations feel a greater sense of belonging and so workers may show a higher level of satisfaction in HPWOs (Bauer, 2004). Lazear worked out that performance pay has been shown to increase productivity in some settings (Lazear, 2000), which may itself increase job satisfaction if workers can witness this and gain in pride, confidence, and self-worth.^{146 147 148}

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There are also studies which show that performance pay can also decrease job satisfaction.

- Performance pay increases not only earnings but also effort and the associated disutility. Coupled with this, the greater stress that comes from performance pay and the associated monitoring can also lower satisfaction (Fernie and Metcalf, 1999).¹⁵⁰
- Performance pay generates greater earnings risk. Indeed, some of the determinants of productivity are beyond workers' control such as injury, sickness, or even bad weather.
- Performance pay leads to a wider distribution of earnings among employees (Lazear, 2000). This may, in turn, lead to discontentment among the less productive workers and an overall reduction in worker morale (Kennedy, 1995). Indeed, workers are generally more satisfied with their jobs if they believe their compensation is "fair" and many workers take equality to be a type of fairness (Brown, 2001).^{151 152 153}
- Frey and Jegen (2001) explain that performance pay may be viewed by workers as an element of control rather than support. In this case, the intrinsic reward an employee might get from the job itself is "crowded-out" or ruined by the controlling aspect of the performance pay scheme.¹⁵⁴

¹⁴⁶ Brown, S. & Sessions, J. G. (2003). Attitudes, Expectations and Sharing. *Labour* 17(4). pp. 543–569

¹⁴⁷ Parent, D. (1999). Methods of Pay and Earnings: A Longitudinal Analysis. *Industrial and Labor Relations Review* 53(1). pp. 71–86

¹⁴⁸ Bauer, T. K. (2004). High Performance Workplaces and Job Satisfaction: Evidence from Europe. IZA Discussion Paper. p. 1265

¹⁴⁹ Lazear, E. P. (2000). Performance Pay and Productivity. *American Economic Review* 90. pp. 1346–1361

¹⁵⁰ Fernie, S. & Metcalf, D. (1999). (Not) Hanging on the Phone: Payment Systems in the New Sweatshop. *Advances in Industrial Relations* 9. 23–68

¹⁵¹ Lazear, E. P. (2000). Performance Pay and Productivity. *American Economic Review* 90. pp. 1346–1361

¹⁵² Kennedy, P. W. (1995). Performance Pay, Productivity and Morale. *Economic Record* 71(3). 251–258

¹⁵³ Brown, M. (2001). Unequal Pay, Unequal Responses? Pay Referents and Their Implications for Pay Level Satisfaction. *Journal of Management Studies* 38. 879–896

¹⁵⁴ Frey, B. S. & Jegen, R. (2001). Motivational Crowding Theory. *Journal of Economic Surveys* 15. 589–611

Also there can be made a relation between firm size, performance pay and job satisfaction. Some literature made a research about HPWOs.¹⁵⁵ ¹⁵⁶ HPWOs mark a change in workplace culture from a hierarchical, task specialization structure to a more flexible structure involving self-responsible teams, more low-level employee involvement in decision making, and an overall more horizontal communication and management style. In HPWOs, the distance between decision makers and typical employees is decreased and so less productivity monitoring is needed. These authors find that workers involved in this more open and flexible work environment are generally more satisfied with their jobs. In addition, Idson (1990)¹⁵⁷ finds that small firms organize in a way resembling an HPWO whereas larger firms are organized in a more hierarchical and inflexible work environment. This implies that employees in smaller firms are more satisfied with their jobs, all else being equal. Previous job satisfaction research has found this relationship to be true (Clark et al., 1996; Green and Heywood, 2007; McCausland et al., 2005).¹⁵⁸ ¹⁵⁹ ¹⁶⁰ ¹⁶¹ ¹⁶²

The main findings out of the research of Benjamin Artz were:

Performance pay is an often used method to align the interests of the employee with those of the firm. However, its impact on job satisfaction is ambiguous as it generates not only greater earnings but also greater effort. Performance pay's impact on job satisfaction is important as workers will leave their jobs if unsatisfied, defeating the firm's original purpose of aligning employee and firm objectives. This paper shows that performance pay increases job satisfaction only in big firms. It is only in these firms that performance pay is able to decrease the distance between workers and decision makers and give workers the opportunity to optimize their effort. In small firms, where productivity is easy to monitor, there can be no gain in job satisfaction from individual performance pay as productivity is already transparent

¹⁵⁵ Applebaum, E. & Berg, P. (2001). High-performance Work Systems and Labor Market Structures. In: Berg I. and Kalleberg A. L. Sourcebook of Labor Markets: Evolving Structures and Processes. New York: Kluwer Academic/ Plenum Publishers. 271–293

¹⁵⁶ Bauer, T. K. (2004). High Workplaces and Job Satisfaction: Evidence from Europe. IZA Discussion Paper. p. 1265

¹⁵⁷ Idson, T. (1990). Establishment Size, Job Satisfaction and the Structure of Work. *Applied Economics* 22. 1007–1018

¹⁵⁸ Applebaum, E. & Berg, P. (2001). High-performance Work Systems and Labor Market Structures. In: Berg I. and Kalleberg A. L. Sourcebook of Labor Markets: Evolving Structures and Processes. New York: Kluwer Academic/ Plenum Publishers. 271–293

¹⁵⁹ Baurer, T. K. (2004). High Performance Workplaces and Job Satisfaction: Evidence from Europe. IZA Discussion Paper. 1265

¹⁶⁰ Green, C. & Heywood, J. S. (2007). Aspects of Job Satisfaction and Performance Related Pay. *Economica* (forthcoming)

¹⁶¹ McCausland, W. D., Pouliakas, K. & Theodossiou, I. (2005). Some Are Punished and Some Are Rewarded: A Study of the Impact of Performance Pay on Job Satisfaction. *International Journal of Manpower* 26 (7/8). 636–659

¹⁶² Clark, A. E. & Oswald, A. J. (1996). Satisfaction and Comparison Income. *Journal of Public Economics* 61. 359–381

and workers are able to optimize their effort at the small firm level. In contrast, job satisfaction of workers increases when big firms use individual performance pay schemes. Performance pay acts as a mechanism that increases worker sense of belonging, decreases worker distance from decision makers, and allows the worker to choose the optimal amount of effort while providing a method for managers to monitor worker effort. Union workers and males in particular report higher job satisfaction when paid based on performance in big firms. Individual performance pay significantly increases male and union worker satisfaction with their promotion prospects, which is a significant portion of overall job satisfaction. Therefore, when paid based on individual performance in big firms, union workers and males achieve higher job satisfaction. As a result, these workers become more content with their jobs and reduce the chance of job turnover caused by low job satisfaction.¹⁶³

1.3.4. Training on the job

There exist a lot of literature regarding training, education and seminars and their relevant influence on employee and job satisfaction.

Training on the job

Yannis Georgellis, Brunel Business School, Brunel University and Thomas Lange, AUT University, Faculty of Business did a research about “Participation in continuous, on-the-job training and the impact on job satisfaction: longitudinal evidence from the German labor market”. A number of studies in the human resources literature acknowledge the importance of workplace training for inducing organizational commitment on the part of workers. However, small sample sizes and the absence of relevant panel data have raised concerns about the general validity of results and highlighted the need for further research to explicitly include on-the-job training as an important facet of job satisfaction. A similar empirical gap exists in the economics and industrial organization literature, where, despite the importance of both on-the-job training and job satisfaction to influence labor productivity, the relationship between the two has received surprisingly little attention. The aim of this paper was to bridge this gap and assess the impact of further training on job satisfaction in the western regions of Germany.¹⁶⁴ In recent years, analysts’ renewed attention to job satisfaction has also been extended to educational achievements. Verhofstadt and Omeij (2003), for

¹⁶³ Artz, B. (2008). Journal compilation © 2008 CEIS. Fondazione Giacomo Brodolini and Blackwell Publishing Ltd.. *LABOUR* 22 (2). pp. 315–343

¹⁶⁴ Georgellis, Y., Lange T. (2007). *The International Journal of Human Resource Management*. Taylor & Francis <http://www.tandf.co.uk/journals> DOI: 10.1080/09585190701321112. pp. 969-985

example, examined the impact of education on job satisfaction in the first job and found that higher educated people seem more satisfied than lower educated people, primarily because the former get a better job.¹⁶⁵

The main findings out of the research of Georgellis and Lange were:

- The job satisfaction of employees has grown in importance. In a world where capital is mobile as never before and where the nation state seems impotent in the face of economic change, attracting, developing and retaining a skilled, motivated and satisfied workforce seems to be all an organization has going for it, if it wishes to maintain and improve its productivity and competitiveness. In fact, “it seems intuitively likely that on average a more highly trained labor force will be better equipped to meet the rapid change in technology, tastes and organizations, which are characteristic of modern economies”.¹⁶⁶
- German firms committed to providing funded training opportunities for employees may encounter rather different results for different target groups. Specifically, when designing and implementing further training programs they need to be aware that significant gender inequality issues may arise.
- The participation of German workers in further training has an impact on job satisfaction.
- Participation in training depends heavily on individual labor market characteristics, such as age, gender, previous qualifications, marital status, and nationality of the individual and the size of the firm in which the employee operates.
- There is a relationship with age and a statistically significant relationship between job satisfaction and health, marital status and earnings.
- Employer-sponsored further training has a positive, statistically significant effect on the job satisfaction of men, but that the same does not hold true for women.
- By drawing on such established approaches as discrepancy theory, equity theory and social exchange theory, Yannis Georgellis and Thomas Lange interpreted their findings by reference to Germany’s well-documented labor market segmentation, which may result in a perceived breach in the psychological contract between the sponsoring firm and female trainees, and an occupational lock-in effect for women. Compared with their male counterparts, women’s lower levels of job satisfaction post training were explained on this basis.¹⁶⁷

¹⁶⁵ Verhofstadt, E. & Omev, E. (2003). The Impact of Education on Job Satisfaction in the First Job. University Gent Working Paper 2003/169 March

¹⁶⁶ Lange, T. (2006). Knowledge and Innovation for New Zealand: Dynamic Benefits of a Two-Stage Wage Strategy and Its Unlikely Application. *Policy Studies*. 27 (1). 71-85

¹⁶⁷ Georgellis, Y., Lange T. (2007). *The International Journal of Human Resource Management*. Taylor & Francis <http://www.tandf.co.uk/journals> DOI: 10.1080/09585190701321112. pp. 969-985

Training and workplace performance

Another very interesting approach is the research of Melanie K. Jones, Richard J. Jones, Paul L. Latreille and Peter J. Sloane School of Business and Economics, Richard Price Building, Swansea University. They did a different research for this item for the Britain labor market: “Training, Job Satisfaction, and Workplace Performance in Britain: Evidence from WERS 2004.” Their paper analyses the relationship between training, job satisfaction, and workplace performance using the British 2004 Workplace Employee Relations Survey (WERS). Several measures of performance are analyzed including absence, quits, financial performance, labor productivity, and product quality. Although there is clear evidence that training is positively associated with job satisfaction and job satisfaction in turn is positively associated with most measures of performance, the relationship between training and performance is complex, depending on both the particular measures of training and of performance used in the analysis.¹⁶⁸

Most of the literature of the effect of training on job satisfaction has focused on the impact of education and skills on job satisfaction rather than the effect of training as such. One exception is Siebern-Thomas (2005) who, analyzing 13 countries in the European Community Household Panel (ECHP) 1994–2001, found that job satisfaction tended to be higher where there was access to workplace training. Hersch found for the USA that over-educated workers were less satisfied than adequately educated workers (Hersch, 1991) and that over-educated workers received less on-the-job training, but were more likely to be promoted (Hersch, 1995). Yet Battu et al. (2000) found a negative relationship between over-education and promotion for UK graduates and no evidence of employers upgrading tasks given to the over-educated.¹⁶⁹ ¹⁷⁰ ¹⁷¹ ¹⁷² Buchel (2002) found no significant difference in job satisfaction between over-educated and adequately educated employees in his study of German firms.¹⁷³

Training can have an indirect effect on performance if it increases job satisfaction by, for example, making it easier for employees to perform the job or feel more valued (as in

¹⁶⁸ Jones, M. K., Jones, R. J., Latreille, P. L. & Sloane, Peter J. (2009). School of Business and Economics, Richard Price Building, Swansea University, Training, Job Satisfaction and Workplace Performance in Britain: Evidence from WERS 2004. Journal compilation CEIS. Fondazione Giacomo Brodolini and Blackwell Publishing Ltd. 2009. pp.139-175

¹⁶⁹ Siebern, T. F. (2005). Job Quality in European Labour Market. In: Bazen S., Lucifora C. and Salverda W. (eds.). Job Quality and Employer Behaviour. Basingstoke, Hants: Palgrave Macmillan. pp. 31–36

¹⁷⁰ Battu, H., Belfield, C. R. & Sloane, P. J. (2000). How Well Can We Measure Graduate Over-education and Its Effects? National Institute Economic Review 171. 82–93

¹⁷¹ Hersch, J. (1991). Education Match and Job Match. Review of Economics and Statistics 73. 140–144

¹⁷² Hersch, J. (1995). Optimal “Mismatch” and Promotions. Economic Inquiry 33. 611–624

¹⁷³ Buchel, B. (2002). The Effects of Overeducation on Productivity in Germany — The Firm’s Viewpoint. Economics of Education Review 21. 263–275

Akerlof's 1982 conceptualization of the labor contract as a gift exchange)¹⁷⁴. Petty et al.'s (1984)¹⁷⁵ meta-analysis confirms such outcomes. In contrast, if workers feel dissatisfied they may react in a number of ways (Farrell, 1983)¹⁷⁶: through a sense of loyalty they may stick it out; use a voice mechanism (Freeman, 1978; Freeman and Medoff, 1984)^{177 178 179}; neglect their responsibilities to the employer by absence, lateness, striking, or reduced effort (Akerlof and Yellen, 1986); or exit (Burdett and Mortensen, 1998; Jovanovic, 1979)^{180 181}.

The main findings of Melanie K. Jones, Richard J. Jones, Paul L. Latreille and Peter J. Sloane were that there is clear evidence that training is positively and significantly associated with job satisfaction and that job satisfaction is also positively and significantly associated with the workplace performance on most measures of performance. The relationship between performance and training is more complicated, with the relationships depending on the features of training and measure of performance considered. Employers may be able to improve establishment performance by increasing the volume of training and taking action to raise the job satisfaction of the workforce, but to succeed in this they also need to pay attention to the quantity and type of training offered.¹⁸²

1.3.5. Interconnection of several determinants of employee satisfaction and general aspects of job satisfaction

Peter Rötzel from the University of Stuttgart did a very interesting study about the interconnection of four parameters influencing Employee satisfaction. Purpose of his paper is the interference of the four determinants “supervisor/leader”, “job design”, “workplace environment” and “performance pay” on employee motivation, analyzed in an empiric

¹⁷⁴ Akerlof, G. (1982). Labor Contracts as a Partial Gift Exchange. *Quarterly Journal of Economics* 97. 543–569

¹⁷⁵ Petty, M., McGee, G. W. & Cavender, J. W. (1984). A Meta-analysis of the Relationships between Individual Job Satisfaction and Individual Performance. *The Academy of Management Review* 9. pp.712–721

¹⁷⁶ Farrell, D. (1983). Exit, Voice, Loyalty and Neglect as Responses to Job Satisfaction: A Multidimensional Scaling Study. *Academy of Management Journal* 26. pp. 596–607

¹⁷⁷ Freeman, R. B. (1978). Job Satisfaction as an Economic Variable', *American Economic Review: Papers and Proceedings* 68: pp. 135–141

¹⁷⁸ Freeman, R. B. & Medoff, J. L. (1984). *What Do Unions Do?* New York: Basic Books.

¹⁷⁹ Akerlof, G. & Yellen, J. (1986). *Efficiency Wage Models of the Labor Market*. Cambridge: Cambridge University Press

¹⁸⁰ Burdett, K. & Mortensen, D. T. (1998). Wage Differentials, Employer Size, and Unemployment. *International Economic Review* 39. pp. 257–273

¹⁸¹ Jovanovic, B. (1979). Job Matching and the Theory of Turnover. *Journal of Political Economy* 87. pp. 972–990

¹⁸² Jones, M. K., Jones, R. J., Latreille, P. L. & Sloane, Peter J. (2009). School of Business and Economics, Richard Price Building, Swansea University, Training, Job Satisfaction and Workplace Performance in Britain: Evidence from WERS 2004. *Journal compilation CEIS. Fondazione Giacomo Brodolini and Blackwell Publishing Ltd.* 2009. pp.139-175

study.¹⁸³ Employee motivation is a relevant success factor in Companies. Motivational research is not only concentrating on monetary aspect, but also on non-monetary aspects like workplace environment, job design and leadership-style (Perry and Hongdehem 2008; Wright 2001).^{184 185}

In empirical studies about employee motivation in public service three main aspects had been elaborated.

- Scope of content, job description and also the focus on general public interest have a high positive impact on Motivation (Houston 2006; Scott and Pandey 2005; Wright 2001; Naff and Crum 1999).^{186 187 188 189}
- Employees in public service have a different general preference than employees in private companies, especially in aspects like job security, working atmosphere, and fair working conditions (Naff and Crum 1999; Jurkiewicz et al. 1998).^{190 191}
- An impact of performance pay on the motivation of employees in public service companies cannot be substantiated effectively. There are some studies which show a slightly positive effect of performance pay (Jurkiewicz et al. 1998; Wittmer 1991), but also some studies which shows an rather negative effect (Scott and Pandey 2005; Boyne 2002; Wright 2001; Brewer et al. 2000).^{192 193 194 195 196 197}

¹⁸³ Rötzel, P. (2012). ZfB. Wiesbaden: Gabler Verlag. p. 82, 807-837

¹⁸⁴ Perry, J.L., Hongdehem, A. (2008). Motivation in public management. The call of public service. Oxford: Oxford University Press

¹⁸⁵ Wright, B.E. (2001). Public sector work motivation: review of current literature and a revised conceptual model. *J Public Admin Res Theory* 11. pp. 559–586

¹⁸⁶ Houston, D.J. (2006). Walking the walk of public service motivation: public employees and charitable gifts of time, blood, and money. *Journal of Public Administration Research and Theory* 16. pp. 67–86

¹⁸⁷ Naff, K.C. & Crum, J. (1999). Working for America: Does public service motivation make a difference? *Rev Public Pers Admin* 19. pp. 5–16

¹⁸⁸ Scott, P.G., Pandey, S. K. (2005). Red tape and public service motivation. *Rev Public Personal Administration* 25.155–180

¹⁸⁹ Naff, K.C. & Crum, J. (1999). Working for America: Does public service motivation make a difference? *Rev Public Pers Admin* 19. pp. 5–16

¹⁹⁰ Naff, K.C. & Crum, J. (1999). Working for America: Does public service motivation make a difference? *Rev Public Pers Admin* 19. pp. 5–16

¹⁹¹ Jurkiewicz, C.L., Massey, J.T.K. & Brown, R.G. (1998). Motivation in public and private organizations: a comparative study. *Public Product Manager Rev* 21. pp. 230–250

¹⁹² Wittmer, D. (1991). Serving the people of serving for pay: reward preferences among government, hybrid sector, and business managers. *Public Product Manager Rev* 14. pp. 369–383

¹⁹³ Wright, B.E.(2001). Public sectorwork motivation: review of current literature and a revised conceptual model. *Journal of Public Administration Research and Theory* 11. 559–586

¹⁹⁴ Scott, P.G. & Pandey, S.K. (2005). Red tape and public service motivation. *Review Public Personal Administration* 25. pp. 155–180

¹⁹⁵ Boyne, G.A. (2002). Public and private management: what's the difference? *Journal Management Study* 39: pp. 97–122

¹⁹⁶ Brewer, G.A., Selden, S.C. & Facer, R.L. (2000). Individual conceptions of public service motivation. *Public Administration Review* 60. pp. 254–264

¹⁹⁷ Wright, B.E. (2001). Public sector work motivation: review of current literature and a revised conceptual model. *Journal of Public Administration Research and Theory* 11. pp. 559–586

To these three parameters the factor supervisor/leader will be added. This is an important driver as several studies provided evidence (Latham 2009; Park 2008; Ryan et al. 1996).^{198 199} Though the satisfaction with the supervisor does not only affect employee motivation, but also satisfaction with their daily job (Kim 2005; Weiss 1996).^{201 202}

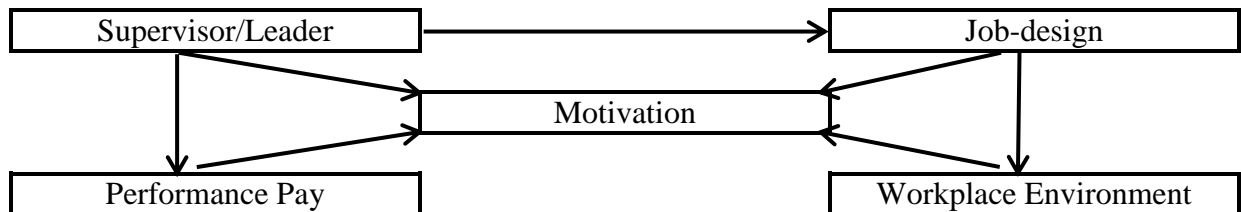


Figure 1.1: Basic model of cause-effect based on Wright

Source: Wright (2001)

The results of the study of Peter Rötzel are showing evidence that the factor job-design is relevant for higher motivation. The factors “supervisor/leader”, “workplace environment” and “performance pay” have a rather less positive effect on employee motivation. The factor supervisor/leader has not a so strong impact on motivation but is crucial for job-design satisfaction and affects the level of satisfaction with performance pay very much.²⁰³

In the paper “An Investigation of National Trends in Job Satisfaction in Britain and Germany” from Francis Green and Nicholas Tsitsianis, Department of Economics, University of Kent a general approach for job satisfaction and dissatisfaction was done. Trends in job satisfaction in Britain and Germany are described, and potential explanations investigated. Contrary to what might be expected from popular commentary, changing job insecurity does not explain the fall in job satisfaction in either country. It was found that intensification of work effort and declining task discretion account for the fall in job satisfaction in Britain. In Germany there was a modest fall in the proportion of people working the number of hours that they wanted to. However, while working too many or too few hours is a significant

¹⁹⁸ Latham, G.P. (2009). Performance management and work motivation prescriptions. In: Burke, R.J., Cooper, C.L. (Hrsg). The peak performing organization. London: Routledge. pp. 33–49

¹⁹⁹ Park, S.M. (2008). Leadership and public service motivation in US federal agencies. *International Public Manager Journal* 11. pp. 109–142

²⁰⁰ Ryan, R.M., Sheldon, K.M., Kasser, T., Deci, E.L. (1996). All goals are not created equal. An organismic perspective on the nature of goals and their regulation. In: Gollwitzer, P.M., Bargh, J.A. (Hrsg). The psychology of action, linking cognition and motivation to behavior. New York: Guilford. pp. 7–26

²⁰¹ Kim, S. (2005). Individual-level factors and organizational performance in government organizations. *Journal of Public Administration Research and Theory* 15. pp. 245–261

²⁰² Weiss, J.A. (1996). Psychology. In: Kettl, D.F., Milward, H.B. (Hrsg). The state of public management. Baltimore: Hopkins University Press. pp. 118–142

²⁰³ Rötzel, P. (2012). *ZfB*. Wiesbaden: Gabler Verlag. p. 82. pp. 807-837

source of job dissatisfaction, the changes were too small to account for the fall in job satisfaction.²⁰⁴ In this article Francis Green and Nicholas Tsitsianis did an inquiry into potential explanations for declines in overall job satisfaction in two countries for which a substantial run of data is available, namely Britain and Germany. Historically, the concept of job satisfaction has been developed theoretically and empirically within sociology and industrial psychology (e.g. Blauner 1964; Herzberg et al. 1957)^{205 206} as well as within the field of organizational behavior (Spector 1997)²⁰⁷. Following Hamermesh (1977, 2001)²⁰⁸ the concept has become recognized as relevant also to economics (Bryson et al. 2004; Clark 1997; Clark and Oswald 1996; Sloane and Bender 1998)^{209 210 211 212}. Little attention has been paid, however, to recent revelations emerging from consistent series of nationally representative survey data (Blanchflower and Oswald 1999; Oswald and Gardner 2002)^{213 214}^{215 216}. Prior to the 1980s, job satisfaction data showed little or no trend. However, since the mid-1980s a selection of new repeat survey series and longitudinal panel data has shown a selective picture of change in job satisfaction in some countries (Hamermesh 2001; Jürges 2003). The paper's central objective of their research, then, is to investigate whether changes in the intrinsic and extrinsic characteristics of jobs can account for the observed changes in job satisfaction.

The major findings and managerial implications out of the research of Green and Tsitsianis were:

²⁰⁴ Green, F. & Tsitsianis, N. (2005). An Investigation of National Trends in Job Satisfaction in Britain and Germany. Department of Economics. University of Kent British Journal of Industrial Relations 43 (September) 0007–1080. pp. 401–429

²⁰⁵ Blauner, R. (1964). *Alienation and Freedom: The Factory Worker and His Industry*. Chicago: University of Chicago Press

²⁰⁶ Herzberg, F., Mausner, B. & Snyderman, B. (1957). *The Motivation To Work*. New York: John Wiley

²⁰⁷ Spector, P. E. (1997). *Job Satisfaction: Application, Assessment, Causes, and Consequences*. London: Sage

²⁰⁸ Hamermesh, D. S. (1977). Economic aspects of job satisfaction. In: Ashenfelter, O. & Oates W. (eds.). *Essays in Labor Market Analysis*. New York: John Wiley. pp. 53–72

²⁰⁹ Clark, A. E. (1997). Job satisfaction and gender: why are women so happy at work? *Labour Economics* 4, pp. 341–72

²¹⁰ Clark, A. E. (2001). What really matters in a job? Hedonic measurement using quit data. *Labour Economics* 8. pp. 223–42

²¹¹ Oswald, A. J. (1996). Satisfaction and comparison income. *Journal of Public Economics* 61. pp. 359–81

²¹² Sloane, P. J. & Bender, K. (1998). Job satisfaction, trade unions and exit-voice revisited. *Industrial and Labor Relations Review* 51. pp. 222–40

²¹³ Blanchflower, D. G. & Oswald, A. J. (1999). Well-Being, Insecurity and the Decline of American Job Satisfaction. Available at: <http://www.andrewoswald.com> (accessed 2013)

²¹⁴ Jürges, H. (2003). Age, cohort, and the slump in job satisfaction among West German workers. *Labour* 17. pp. 489–518

²¹⁵ Oswald, A. J. (1997). Happiness and economic performance. *Economic Journal* 107. pp. 1815–31

²¹⁶ Gardner, J. (2002). How Does Education Affect Mental Well-Being and Job Satisfaction? Available at: <http://www.andrewoswald.com> (accessed 2013)

- The intensification of “work effort and declining task discretion” account for the fall in job satisfaction in Britain. The modest rise in participation in organizational decision-making only mitigated the downward pressure on job satisfaction to a small extent.
- Contrary to the arguments of some popular commentary, job insecurity is not a plausible explanation of declining job satisfaction in Britain. Perceptions of insecurity decreased during the 1990s, following the falls in the aggregate unemployment rate. In Germany, by contrast, insecurity increased during the 1990s. Nevertheless, taken over the whole period of decline in job satisfaction, from 1984 until the late 1990s, job insecurity fails to account for the change.
- Changes in the “worker-job match” are relevant, but not substantial enough to explain the declines in job satisfaction. While working “too few or too many hours” is a significant source of job dissatisfaction, the proportion whose hour preferences were well-matched to their jobs was stable in Britain, and fell only modestly in Germany. The increasing proportions of “over-educated” workers had a small downward impact on job satisfaction in Britain.²¹⁷

Comparing to the research of Alfonso Souza-Poza and Andres Souza-Pouza, 2000 “Well-being at work: a cross-national analysis of the levels of determinants of job satisfaction”, this paper brings not a different sight to this topic but an additional one.²¹⁸ Based on this research in the chapters before it can be assumed that there is a broad variety of factors and issues influencing employee satisfaction in a positive way or not.

Figure 1.2. gives a rough overview about the fields of research regarding employee satisfaction. The results are based not only on literature research, but also on the authors experience as a successful manager for more than 25 years.

²¹⁷ Green, F., Tsitsianis, N. (2005). An Investigation of National Trends in Job Satisfaction in Britain and Germany. *British Journal of Industrial Relations* 43 (September). pp. 401–429

²¹⁸ Sousa-Poza, A. & Sousa-Poza A. (2000). Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction. *Journal of Socio-Economics* 29. pp. 517-538

<p>Organisation</p> <ul style="list-style-type: none"> ▪ Firm size ▪ Nationality ▪ Culture 	<p>People</p> <ul style="list-style-type: none"> ▪ Leadership Style ▪ Participative Management ▪ Worker-job match ▪ Over-educated workers ▪ People related TQM practices 	<p>Job</p> <ul style="list-style-type: none"> ▪ On the job training ▪ Job design ▪ Job security ▪ Job insecurity ▪ Work-role input ▪ Work-role output ▪ Performance pay ▪ Participation in organizational decision-making processes ▪ Intensification of work effort and declining task discretion
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Figure 1.2: Dependencies and relevant factors of employee satisfaction and dissatisfaction

Source: Brenninger H.-J., November 2011

In the paper: “Employee satisfaction: Not Fortune, but Approach”. The author showed evidence that these issues and relevant factors can be managed by leaders or managers. There are relevant dependencies between these single factors. Managers should adopt their leadership or management style to the appropriate situation and environment.²¹⁹ Therefore it is absolutely obvious for managers to know, what are the drivers for employee satisfaction in a working environment and how can they be influenced.

1.3.6. Findings of “determinants of employee satisfaction”

There are many factors influencing employee satisfaction or dissatisfaction. It is quite difficult to point some out. In the authors opinion leadership style generally has a very high impact on job satisfaction.²²⁰

Comparing the different leadership styles the most positive impact on employee satisfaction can be reached with a participative motivating leadership style. Besides all limitations and directions for further research it seems evident that participative management and participative planning processes have a positive effect on job satisfaction.²²¹ It is essential for leaders to know that motivation of employees which is the basement for their performance is difficult to observe, but can be developed through their resonance. For leaders it is very important to be on the same “wavelength” as their employees. Extraordinary results can be reached when an employee feels that the leading impulse of his supervisor is absolutely

²¹⁹ Brenninger, H.-J. (Nov. 2011). Employee satisfaction: Not Fortune, but Approach. Riga: University of Latvia. pp. 114-125

²²⁰ Brenninger, H.-J. (Nov. 2011). Employee satisfaction: Not Fortune, but Approach. Riga: University of Latvia. pp. 114-125

²²¹ Soonhee, K. (2002). Public Administration Review, March/April 2002, Vol. 62, No.2. Las Vegas: University of Nevada. pp. 231-237

congruent with his personnel wishes and perceptions.²²² In the period of globalization and the increased importance of multinational companies, it is mandatory for managers that they adopt their leadership style to different cultures and motivate their employees based on their different requirements.²²³ A participative motivating leadership style is more appropriate to our society and based on the research above leads to higher employee satisfaction.

There are some very important managerial or leadership implications which have to be considered by running a company or another organization to get satisfied employees, satisfied customers and good financial results.²²⁴

- For getting satisfied employees and good results managers have to adapt their leadership style in a way that employees get more involved in the decision making processes to get a higher level of commitment for company goals.
- Managers have to create a compelling future. They have to create and describe a vision, which is visible to the employees and accepted from the staff.
- Managers have to involve as many employees as possible. They have to support individual and team effort and share information through the company for motivating employees. Also very important for managers is to build personal credibility that employees can rely to the management. They have to take initiative beyond job requirements. Good managers/leaders take responsibility for their own actions and the actions of their group.
- Managers have to implement processes and strategies for reducing employee turnover
- Good Managers don't work only vertically they also work horizontally, which means they have to manage cross-functional processes, projects, time and resources.
- For getting satisfied customers it is very important to respond to their identified needs, which means successful managers let the customer drive the organization.
- Successful, well managed and organized companies show a kind of positive "Leading-behavior".
- Managers have to accept that a more participative style is more aligned with our community of the 21th century and our daily life and therefore companies will get better results with a more participative and communicative "Leadership-Style".

²²² Golemann, D., Boyatzis, R. & McKee, A. (2004). *Emotionale Führung*. Berlin: Ullstein Buchverlage GmbH (2. Auflage). p. 48

²²³ Sousa-Poza, A. & Sousa-Poza A. (2000). Well-being at work: a cross-national analysis of the levels and determinants of job satisfaction. *Journal of Socio-Economics* 29. pp. 517-538

²²⁴ Brenninger, H.-J. (May 2011). *Company Value and Employee Satisfaction: Development of Theoretical Framework*. Riga: University of Latvia. pp. 65-74

In a next step a literature research regarding the relation between employee satisfaction, turnover, financial results and company value will be done in the following chapters.

1.4. Literature review to employee satisfaction and financial results

There are a lot of relevant factors influencing the success of a company. Especially market, industry, financial crisis are influencing the financial results of a company tremendously. These issues cannot be managed or captured in an easy way. Regarding these fields intensively would bring a completely different view in the dissertation. In this research the author will consider these other issues in the dissertation and deal with them neutral. That means that the author will concentrate on possibilities or issues in the area of human resource management, leadership styles and company environment which can be influenced by leaders or management. These elements will build the base for the dissertation and also for further research which will be done in the ongoing chapters.

1.4.1. Corporate responsibility, employee satisfaction, company results

The complex of corporate responsibility as earlier mentioned in the dissertation is a very important issue for employee satisfaction which leads to customer satisfaction and therefore to better company results.

Jeremy Galbreath from the Curtin University of Technology, Perth, Australia made a very interesting research about CSR and its impact on company performance:

“How does corporate social responsibility benefit firms? Evidence from Australia”²²⁵

This research empirically examines three potential benefits of demonstrating CSR and worked out three hypotheses:

- CSR will diminish employee turnover;
- CSR is positively associated with customer satisfaction;
- CSR is positively associated with company reputation.

The findings suggest that firms engaging in CSR can benefit in ways beyond a pure bottom-line outcome. First, due to exhibited fairness, socially responsive activities appear to be means to reduce employee turnover. Second, by meeting justice needs of customers, CSR is likely to increase customer satisfaction. Lastly, CSR activities provide visible signals from which stakeholders infer various positive characteristics of firms, thus creating an avenue to increase

²²⁵ Galbreath, J. (2010). Curtin University of Technology, Perth, Australia. *European Business Review* Vol. 22 No. 4. pp. 411-431

overall firm reputation. Positive firm reputation is very important in our competitive environment for success. Executives continue to suggest that employees are their most valuable asset and that a firm's ability to retain employees is a hallmark and signal of organizational success (PricewaterhouseCoopers, 2007). Several scholars also find that retaining employees has positive consequences for firms' financial performance and productivity (Huselid, 1995; Guthrie, 2001).²²⁶ Achieving high levels of customer satisfaction has become one of the most essential goals of firms and is an important focus of corporate strategy (Homburg et al., 2005).

The equity theory (Oliver, 1997)²²⁷ posits that in exchanges, if customers feel equitably treated – namely their input to the exchange is in balance with the output of the exchange – satisfaction is the result (Goodwin and Ross, 1992; Oliver, 1997). Hence, customers incur certain costs (inputs) in exchanges for a certain level of output from firms. According to Oliver and Swan (1989a, b) and Bolton and Lemon (1999), equity is the customer's reaction to these ratios of inputs to outputs – or fairness. Equity, in turn, affects a customer's overall evaluation of the firm. With respect to this study, there are several ways CSR is expected to demonstrate equity towards customers and lift their satisfaction levels.²²⁸

The causal relationship between employee satisfaction, customer satisfaction, and profitability is a topic of growing academic and managerial interest (e.g. Oliver, 1997; Reichheld, 1996²²⁹; Rust et al., 1995²³⁰; Estelami, 2000²³¹; Heskett et al., 1997²³²). This stream of research has helped conceptualize the notion of a "service profit chain" (Heskett et al., 1994, 1997²³³), in which firm profitability is hypothesized to be dependent on the satisfaction levels of employees and customers of a service organization. In "The service profit chain" it is postulated that higher employee satisfaction levels lead to higher customer satisfaction, and therefore ultimately affects consumer loyalty and profitability. This line of thinking not only has an intuitive appeal, but it also highlights the critical role of customer and employee

²²⁶ Galbreath, J. (2010). Curtin University of Technology, Perth, Australia. *European Business Review* Vol. 22 No. 4. pp. 411-431

²²⁷ Oliver, R.L. (1997). *Satisfaction: A Behavioral Perspective on the Consumer*. New York: McGraw-Hill

²²⁸ Galbreath, J. (2010). Curtin University of Technology, Perth, Australia. *European Business Review* Vol. 22 No. 4. pp. 415

²²⁹ Reichheld, F.F. (1996). *The Loyalty Effect*. Boston, MA: Harvard Business School Press

²³⁰ Rust, R.T., Zahorik, A.J. & Keiningham, T.L. (1995). Return on quality (ROQ): making service quality financially accountable. *Journal of Marketing* Vol. 59 (April). pp. 58-70

²³¹ Estelami, H. & DeMaeyer, P. (2002). An exploratory study of customer reactions to service provider overgenerosity. *Journal of Service Research* Vol. 4 No. 3. pp. 205-17

²³² Heskett, J.L., Sasser, W.E. Jr & Schlesinger, L.A. (1997). *The Service Profit Chain*. New York: The Free Press

²³³ Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E. Jr & Schlesinger, L.A. (1994). Putting the service-profit chain to work. *Harvard Business Review* Vol. 72 (March/April). pp. 164-70

satisfaction in the profit generation process, and provides a vision for how service organizations should reengineer themselves in order to improve long-term profitability.²³⁴

Wayne Visser did 2011 also a very interesting approach about CSR in his Paper: “The Ages and Stages of CSR - Towards the Future with CSR 2.0”.²³⁵ This article argues that CSR, as a business, governance and ethics system, has failed. This assumes that success or failure is measured in terms of the net impact (positive or negative) of business on society and the environment. The article reviews business’s historical progress over the Ages and Stages of CSR: moving through the Ages of Greed, Philanthropy, Marketing and Management, using defensive, charitable, promotional and strategic CSR approaches respectively. It then examines the Three Curses of CSR 1.0 (incremental, peripheral and uneconomic), before exploring what CSR might look like in an emerging Age of Responsibility. This new CSR – called systemic or radical CSR or CSR 2.0 – is based on five principles (creativity, scalability, responsiveness, glocality and circularity) and forms the basis for a new model of responsible business, built around the four elements of value creation, good governance, societal contribution and environmental integrity. He defines CSR as follows: ”CSR is the way in which business consistently creates shared value in society through economic development, good governance, stakeholder responsiveness and environmental improvement. Put another way, CSR is an integrated, systemic approach by business that builds, rather than erodes or destroys, economic, social, human and natural capital.” He found it useful to view the evolution of business responsibility in terms of five overlapping periods – the Ages of Greed, Philanthropy, Marketing, Management and Responsibility – each of which typically manifests a different stage of CSR, namely: Defensive, Charitable, Promotional, Strategic and Systemic CSR. His contention is that companies tend to move through these ages and stages (although they may have activities in several ages and stages at once), and that they should be encouraging business to make the transition to Systemic CSR in the dawning Age of Responsibility. If companies remain stuck in any of the first four stages, He doesn’t believe that they will turn the tide on the environmental, social and ethical crises that they face. Therefore, CSR will continue to fail. The failure of those approaches from the Ages of Greed, Philanthropy, Marketing and Management – failed so spectacularly to address the very issues it claims to be most concerned about? In Visser’s view, this comes down to three factors – call it the Triple Curse of Modern CSR.

²³⁴ Hurley, R. F. & Hooman E. (2007). *Journal of Services Marketing* 21/3. New York, USA: Fordham University. pp. 186–199

²³⁵ Visser, W. (2011). *CSR International Paper Series* No. 3

- CSR has remained largely restricted to the largest companies, and mostly confined to PR, or other departments, rather than being integrated across the business.
- CSR has adopted the quality management model, which results in incremental improvements that do not match the scale and urgency of the problems.
- CSR does not always make economic sense, as the short-term markets still reward companies that externalize their costs to society.

Based on these issues Visser did an adaption of CSR and called it CSR 2.0: “By contrast, as we enter the Age of Responsibility, Systemic CSR – which he also refers to as CSR 2.0 – can be characterized by five principles, namely: Creativity, Scalability, Responsiveness, Glocality and Circularity.” This is a clear indication that employees’ competences and skills have to be strongly considered by business management when it comes to the integration of employees’ potential into successful strategic decisions. “Business is naturally creative and innovative. What is different about the Age of Responsibility is that business creativity needs to be directed to solving the world’s social and environmental problems. It is not a panacea, but for some products and services, directing the creativity of business towards the most pressing needs of society is the most rapid, scalable way to usher in the Age of Responsibility.”²³⁶ Again, the integration and the utilization of the key competences mentioned above are part of a responsible and goal oriented management conduct. In his article Visser mentions: “The sustainability problems we face, be they climate change or poverty, are at such a massive scale, and are so urgent, that any CSR solutions that cannot match that scale and urgency are red herrings at best and evil diversions at worst.” The severity of the global problems we face demands that companies go much further. CSR 2.0 requires uncomfortable, transformative responsiveness, which questions whether the industry or the business model itself is part of the solution or part of the problem. CSR 2.0 responsiveness also means greater transparency, not only through reporting mechanisms, but also by sharing critical intellectual resources.²³⁷ It can be stated that sustainability management is also an integral part of CSR and thus of business success and company value. The term “glocalization” simply means global localization. In a CSR context, the idea of “think global, act local” recognizes that most CSR issues manifest as dilemmas, rather than easy choices. In a complex, interconnected CSR 2.0 world, companies (and their critics) will have to become far more sophisticated in understanding local contexts and finding the appropriate local solutions they demand, without

²³⁶Visser, W. (2011). CSR International Paper Series No. 3

²³⁷ Visser, W. (2008). The Long Tail of Corporate Social Responsibility. CSR Inspiration Series No.5. Published online by CSR International: www.csrinternational.org

forsaking universal principles. Circularity needn't only apply to the environment. Business should be constantly feeding and replenishing its social and human capital, not only through education and training, but also by nourishing community and employee wellbeing. CSR 2.0 raises the importance of meaning in work and life to equal status alongside ecological integrity and financial viability. Paternalistic relationships between companies and the community based on philanthropy will give way to more equal partnerships. Defensive, minimalist responses to social and environmental issues will be replaced by proactive strategies and investment in growing responsibility markets, such as clean technology. Reputation-conscious public-relations approaches to CSR will no longer be credible and so companies will be judged on actual social, environmental and ethical performance, Visser's main findings are that CSR 2.0 comes down to the clarification and reorientation of the purpose of business. In his opinion is the purpose of business to serve society, through the provision of safe, high quality products and services enhance our wellbeing, without eroding our ecological and community life-support systems.²⁵⁸ Summarizing our subchapter of CSR, it can be pointed out that CSR has a significant impact on employee satisfaction and thus on company value and business performance as well.

1.4.2. Effects of employee turnover and employee attitudes and their impact on customer satisfaction and profitability

In the article "An exploratory study of employee turnover indicators as predictors of customer satisfaction", Robert F. Hurley and Hooman Estelami from the Fordham University, New York, USA, tried to combine this with the factor which has been somewhat ignored in studying this phenomenon has been the role played by employee turnover and what effect it has on customer satisfaction and improvements to long-term profitability. Employee satisfaction is considered to be driven by perceptions of various store management variables such as training, communications, and empowerment. The resulting employee satisfaction is expected to influence employee loyalty levels, as reflected in the turnover indicators. Moreover, employee satisfaction and turnover may both have direct and indirect effects on customer satisfaction levels.²³⁸ The results of the research of Robert F. Hurley and Hooman Estelami were that the test of various turnover indicators suggests that certain employee turnover indicators can perform as effectively as single-item employee satisfaction ratings do in predicting customer satisfaction.

²³⁸ Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E. Jr & Schlesinger, L.A. (1994). Putting the service-profit chain to work. Harvard Business Review Vol. 72 (March/April). pp. 164-70

→ Therefore one other proof that there is a relation between working circumstances, employee satisfaction which results in lower employee turnover rates and at the end leads to higher customer satisfaction.

It is important to note that the results reported here are specific to one particular industry. As a result, managers must examine the various indicators outlined here within the context of their own marketplace. We cannot generalize across all industries, and specific turnover measures may be better predictors of customer satisfaction in some markets than in others. As a result, an industry-specific exploratory analysis of the predictive ability of turnover indicators may be required prior to their use. Moreover, it is crucial that managerial judgments of turnover rates take into account the proportion of turnover attributed to be voluntary versus non-voluntary. Voluntary turnover is expected to be more indicative of poor working environments and more closely associated with poor customer satisfaction levels.²³⁹ This study gives clear evidence about the relation between employee satisfaction, employee turnover and financial results.

Linda L. Pierce, Coletta M. Hazel and Lorraine C. Mion made a very interesting research in February 1996. In the study: “Effect of a Professional Practice Model on Autonomy, Job Satisfaction and Turnover”²⁴⁰ a comparison between job satisfaction, autonomy at work and job turnover, especially for registered nurses, shows that there is an evident relation between these three issues. This research had a big focus of working circumstances and leadership issues. They pointed out that working circumstances like autonomy of the employees and leadership style have a high impact on job satisfaction and therefore also on the turnover rate of the staff.

Even for example models in TQM or the “Balanced Score Card” assume dependencies between company value and stake holders. These factors have to be well balanced to be successful.^{241 242 243} One can find a lot of different approaches to these items, but none of the authors neglects a coherency between satisfied workers and successful performances in business. Only the way they approach the results is based on different starting points. The results are very similar and say: There is a connection between high motivated staff and

²³⁹ Hurley, R. F. & Hooman E. (2007). *Journal of Services Marketing* 21/3. New York, USA: Fordham University. pp. 194-195

²⁴⁰ Pierce, L. L., Hazel C. M. & Mion L. C. (1996). *Nursing Management/Vol27 No.2* (February)

²⁴¹ Jaritz, A. (1999). *TQM und Mitunternehmertum im Humanressource Management*. Hampp

²⁴² Freidag, H.R. & Schmidt, W. (1999). *My Balanced Scorecard: Mehr als ein Kennzahlensystem*. Freiburg im Breisgau: Haufe Verlag (Auflage 4)

²⁴³ Kaplan, R.S. & Norton D. P. (1997). *Balanced Scorecard: Strategien erfolgreich umsetzen*. Stuttgart: Schäfer-Poeschel-Verlag

satisfied customers, and satisfied customers are a factor of success. At the end you can see this success in balance sheets and it is reflected in a better company value. To be motivated depends on the way one treats a person. The way one handles the staff can also be called its leadership style.^{244 245 246 247}

Another very interesting approach was made from Dennis J. Adsit (Rath & Strong Inc., Massachusetts, USA), Manuel London (State University of New York at Stony Brook, New York, USA), and Steven Crom and Dana Jones (Rath & Strong, Inc., Massachusetts, USA) in their article “Relationships between employee attitudes, customer satisfaction and departmental performance”.²⁴⁸

In this paper the relationships between productivity, administrative effectiveness, customer satisfaction, and employee attitudes were examined.

“The goal was to determine the extent to which employee attitudes distinguish between departments and the extent to which these differences are associated with productivity, administrative effectiveness, and customer satisfaction. In general, we hypothesize that work groups differ in employee attitudes and that these differences relate to recently achieved performance and customer satisfaction and also predict future performance and customer satisfaction.”²⁴⁹

One of the interesting results was the same as Nadler 1977 stated in his article “Employees supposedly feel more involved in the organization when their input is requested. The process also increases the salience of managerial behavior towards subordinates to organizational effectiveness and productivity.”²⁵⁰ Also Weisbord (2008) substantiated this in his book: “To encourage self-management let the employees be responsible and involved in the change management process.”²⁵¹

→ This shows the importance of the positive involvement of employees in the decision making process.

²⁴⁴ Holtbrügge, D. (2007). Personalmanagement. Berlin / Heidelberg: Springer-Verlag GmbH (Auflage 2). pp. 12-36

²⁴⁵ Malik, F. (2006). Effective Top Management. Wiley-VCH (Auflage 3). pp. 25-32

²⁴⁶ Malik, F. (2006). Führen, Leisten, Leben. Frankfurt / New York: Campus Verlag. pp. 65

²⁴⁷ Rosenstiel von, L.(2007). Grundlagen der Organisationspsychologie: Basiswissen und Anwendungshinweise. Stuttgart: Schäfer-Poeschel-Verlag (Auflage 6). pp. 55

²⁴⁸ Adsit, D. J. (Rath & Strong Inc., Massachusetts, USA), London, M. (State University of New York at Stony Brook, New York, USA), Crom S. & Jones D. (Rath & Strong, Inc., Massachusetts, USA) (1996). Journal of Management Development Vol. 15 No. 1. MCB University Press. pp. 62-75

²⁴⁹ Adsit, D. J. (Rath & Strong Inc., Massachusetts, USA), London, M. (State University of New York at Stony Brook, New York, USA), Crom S. & Jones D. (Rath & Strong, Inc., Massachusetts, USA) (1996). Journal of Management Development Vol. 15 No. 1. MCB University Press. pp. 66

²⁵⁰ Nadler, D.A. (1977). Feedback and Organization Development: Using Data based Methods. Reading, MA: Addison-Wesley

²⁵¹ Weisbord, M. & Janoff, S. (2008). Let People Be Responsible. Consulting Today. www.consultingtoday.com

Another proof of the high correlation between employee satisfaction and customer loyalty is stated in a research about bank branches.²⁵² Specifically, significant positive relationships occurred between employee attitudes about the organization's human-resource practices and customer attitudes about the service they received. This implies that the same kind of organizational practices which affect service quality to customers also affect how employees are treated.^{253 254}

Subsequent research supported and extended the above finding. In a study of 147 branch offices of a credit corporation, Ryan and Schmit²⁵⁵ found that customer satisfaction was positively related to employee perceptions of a manageable workload, lower stress, and opportunities for training and development. Branch morale was positively related to performance measures (higher market share, lower delinquent loan rates, and higher volume of activity). Furthermore there was a significant negative relationship between customer satisfaction and employee turnover.

Tornow and Wiley²⁵⁶ studied relationships between customer satisfaction, employee attitudes, and organizational performance in a large, multinational computer organization. They found that employees' perceptions of their organization's culture for success consistently showed positive relationships with organizational performance measures. Interestingly, employee satisfaction with pay and benefits consistently showed negative relationships with organizational performance indicators, suggesting that these elements of job satisfaction were less reflective of management practices that deal with organizational success. Another finding in the Tornow and Wiley²⁵⁷ study was that employee perceptions of an organization's "culture for success" showed substantial relationships to customer satisfaction. Another employee attitude dimension highly related to measures of customer satisfaction was personal responsibility, which included such items as "Commitment to helping my business unit succeed" and "I protect the company's property and business information as if it were my own".

²⁵² Schneider, B. & Bowen, D. (1985). Employee and customer perceptions of service in banks: replication and extension. *Journal of Applied Psychology* Vol. 70. pp. 423-33

²⁵³ Schneider, B. & Bowen, D., "Employee and customer perceptions of service in banks: replication and extension", *Journal of Applied Psychology*, Vol. 70, 1985, pp. 423-33

²⁵⁴ Schneider, B., Parkington, J. and Buxton, V., "Employee and customer perceptions of service in banks", *Administrative Science Quarterly*, Vol. 25, 1980, pp. 252-67

²⁵⁵ Ryan, A.M. and Schmit, M.J., "Validation of the Ford Pulse: report to Ford Motor Credit Corporation", unpublished manuscript, Institute for Psychological Research and Application, Bowling Green State University, Bowling Green, OH, 1993

²⁵⁶ Tornow, W.W. & Wiley, J.W. (1990). Service quality and management practices: a look at employee attitudes, customer satisfaction, and bottom-line consequences. *Human Resource Planning* Vol. 14. pp. 105-15

²⁵⁷ Tornow, W.W. & Wiley, J.W. (1990). Service quality and management practices: a look at employee attitudes, customer satisfaction, and bottom-line consequences. *Human Resource Planning* Vol. 14. pp. 105-15

In another study of relationships between organizational performance, customer satisfaction, and employee attitudes, Wiley²⁵⁸ studied data from over 200 retail stores. He found that, overall, those stores most favorably described by employees were those most favorably described by customers. In particular, customer satisfaction ratings were strongly and positively related to employees' descriptions of key aspects of their working environment, especially working conditions, minimum obstacles to accomplishing their work, and a strong sense that supervisors and co-workers stress customer service. A number of employee attitude dimensions were related to customer satisfaction. One such employee attitudinal dimension was effective communication, which included items such as "my work group is told about upcoming changes in time to prepare for them" and "I get enough information about how well my work group is meeting its goals". Another attitudinal dimension was supervisory practices, which included items such as "My supervisor/manager makes it clear what I am expected to do".²⁵⁹

But there are also studies which proclaim a completely different point of view.

For example the research note: "Reexamining the link between employee satisfaction and store performance in a retail environment" from Timothy L. Keiningham IPSOS Loyalty, Parsippany, New Jersey, USA, Lerzan Aksoy College of Administrative Sciences and Economics, Koc, University, Istanbul, Turkey, Robert M. Daly and Kathy Perrier IPSOS Loyalty, Parsippany, New Jersey, USA, and Antoine Solom, IPSOS Loyalty, Paris, France.²⁶⁰

The purpose of this study was to examine the generalizability/robustness of the findings in an exploratory study of "The Service-Profit Chain" using data from another Western European retailer operating in the same business sector.

But the findings differ significantly from those of the exploratory study. When looking at the relationship between employee satisfaction and store profitability, the correlation is found to be effectively zero. When controlling for the size of store, however, the relationship is found to be positive.²⁶¹ The purpose of this research note was to test the generalizability Silvestro's

²⁵⁸ Wiley, J.W. (1990). Customer satisfaction: a supportive work environment and its financial cost. *Human Resource Planning*, Vol. 14. pp. 117-27

²⁵⁹ Wiley, J.W. (1990). Customer satisfaction: a supportive work environment and its financial cost. *Human Resource Planning*, Vol. 14. pp. 117-27

²⁶⁰ Keiningham, T. L. (IPSOS Loyalty, Parsippany, New Jersey, USA), Lerzan, A. (College of Administrative Sciences and Economics, Koc, University, Istanbul, Turkey), Daly Robert M. and Perrier Kathy IPSOS Loyalty, Parsippany, New Jersey, USA, and Solom Antoine, IPSOS Loyalty, Paris, France; *International Journal of Service Industry Management* Vol. 17 No. 1, 2006, pp. 51-57

²⁶¹ Keiningham, T. L. (IPSOS Loyalty, Parsippany, New Jersey, USA), Lerzan, A. (College of Administrative Sciences and Economics, Koc, University, Istanbul, Turkey), Daly Robert M. and Perrier Kathy IPSOS Loyalty, Parsippany, New Jersey, USA, and Solom Antoine, IPSOS Loyalty, Paris, France; *International Journal of Service Industry Management* Vol. 17 No. 1, 2006, pp. 51-57

(2002)²⁶² and Silvestro and Cross's (2000)²⁶³ findings that asserted a negative relationship between employee satisfaction measures and store profitability. This was done using a much larger dataset, using a retailer located in the same category and on the same continent.

Their conclusions differ substantially from those of Silvestro and Cross. While Silvestro and Cross find a strong negative correlation between employee satisfaction and store profitability, they found that employee satisfaction has no relationship to store profitability. When controlling for size of store, however, they found a positive relationship.

→ This result that there is no relationship between employee satisfaction and store profitability brings a completely new view in the discussion about employee satisfaction.

Therefore it is evident that the relationship between employee satisfaction and company value has to be tested also with hard financial figures.

Summing up it can be assessed that there are a lot of relevant factors influencing financial results and the company value of a firm.²⁶⁴ Fig. 3 gives a rough overview about factors influencing financial results of companies. As mentioned before the author will focus in this dissertation in the area of human resource management, leadership style and working environment, issues like market, industry, financial crises e.g. will be handled neutral.

<ul style="list-style-type: none"> • Company reputation • Corporate Social Responsibility • Leadership style • Working circumstance 			<ul style="list-style-type: none"> • Productivity • Industry • Total Quality Management
	Company	Product	
	People	Market	
<ul style="list-style-type: none"> • Employee satisfaction • Employee turnover • Autonomy of work 			<ul style="list-style-type: none"> • Market economy • Customer loyalty • Customer satisfaction

Figure 1.3: Issues influencing on financial results of companies

Source: Brenninger H.-J., December 2011

These issues of factors influencing financial results of companies can interact or counteract each other.

²⁶² Silvestro, R. (2002). Dispelling the modern myth: employee satisfaction and loyalty drive service profitability. *International Journal of Operations & Production Management* Vol. 22 No. 1. pp. 30-49

²⁶³ Silvestro, R. & Cross, S. (2000). Applying the service profit chain in a retail environment. *International Journal of Service Industry Management* Vol. 11 No. 3. pp. 244-68

²⁶⁴ Brenninger, H.-J. (Dec. 2011). *Company Value and Employee satisfaction: Exemplary findings from the USA and Possibilities for computing Company Value*. Fulda: University of Applied Sciences

1.4.3. Findings of employee satisfaction and financial results

Out of this research some findings and managerial implications can be stated:

- This study gives evidence that there are different possibilities for influencing employee or staff satisfaction and therefore financial results.
- Employee and job satisfaction are very important for company success and can be managed in different ways.
- Managers should have a strategy how to organize their workplace environment and which leadership style fits best.
- Very important for managers is the sight on different countries and cultures to adopt the management and leadership style. With the increased importance of multinational companies, it is mandatory for managers that they know how job satisfaction can be influenced in different cultures and how to deal with it.
- This research shows also evidence that employee satisfaction may lead to better company performance and financial results, therefore managers have to give their employees a workplace environment which leads to staff satisfaction.
- The research about employee satisfaction and company performance was made in different countries, therefore managers have to verify if these methods also fit to their country and culture where their company is located.
- Investigations about other HR practices like recruitment/ selection/ training and other reward systems should be done.

Regarding this research and the managerial implications it is mandatory for managers to deal with it. This research shows evidence that employee satisfaction is not fortune but approach. Employee satisfaction can be managed and improved, which leads to better financial results and therefore higher company value. Out of these different approaches for getting satisfied employees methods can be evaluated and implemented for improving the workplace environment to systematically go to a “Great Place to Work[®]”.²⁶⁵

Suggestion for further research:

- ➔ In a next step a research in Germany should be made where a comparison between employee satisfaction and the development of financial result or company value based on hard figures out of balance sheets and profit & loss accounts is to be done²⁶⁶.

²⁶⁵ Brenninger, H.-J. (Nov. 2011). Employee satisfaction: Not Fortune, but Approach. Riga: University of Latvia. pp. 114-125

²⁶⁶ Brenninger H.-J. & Neuert J. (2014 January). Company Value and Employee Satisfaction - Theoretical Analysis and Empirical Findings. Management Studies. David Publishing Company, 16710 East Johnson Drive, City of Industry, CA 91745, USA. The publication of the paper is in progress.

Therefore the “Elektronischer Bundesanzeiger” and the Great Place to Work[®] Institute will build the base for the further research. In the USA a study which also uses the results of the Great Place to Work[®] Institute and financial data is already done and will be elaborated in a secondary data analysis in the third chapter.

2. THEORETICAL MODEL AND SET OF HYPOTHESES CONCERNING “EMPLOYEE SATISFACTION AS THE INDEPENDENT VARIABLE AND ITS IMPACT ON COMPANY VALUE AS THE DEPENDENT VARIABLE”

The main interest of this work lies in the field of identifying possibilities of optimization of management processes, leadership, organizational culture and behavior and the proof if there is any direct or indirect relation for increasing company value.

The situation in the market does not allow ignoring any efforts one can reach, because competition pressure is strong and margin of profit gets steadily smaller. To be successful one cannot ignore any chance to get better. Even as the internal working atmosphere has a strong influence to the external performance at the customers,²⁶⁷ Heidecker states in his work: „On the one hand, the value of human capital is often underestimated because of the deficit of externally information but otherwise the human capital is mostly less enough company-controlled by the success criteria, which are externally in the visual focus...”. “Below value ... denotes not solely the financial contribution of its employees to the company’s value, but also the overall benefit they donate to their company”. Before starting the research process, different assumptions will be the basics of the dissertation and should be audited during the research process in this work.

Based on the Great Place to Work[®] study and companies balance sheets, which they have to release in the “Elektronischer Bundesanzeiger”, one has to proof if the company value of the winning companies changed from the study 2007 until 2009 and find the relation between their employee satisfaction, culture and better economic results.

The first step will be the localisation of the fields of inquiry and support of the main questions by science knowledge and literature to build a theoretically solid framework. This framework is mainly supported by the comments and cognitions from Lutz v. Rosenstiel, Fredmund Malik, Peter Drucker, Michael Heidecker, Dirk Holtbrügge, Hans Hinterhuber and others. Psychological and economic expertise will be mentioned. Also basic principles to calculate company value will take place in the framework.

The results of Great Place to Work[®] 2007 and 2009 and the balance sheets of the winning companies 2006, 2008 build the data base for the comparison, because the evaluation of the Great Place to Work[®] Contest always starts in the year before the results are published.

²⁶⁷ Heidecker, M. (2003). Wertorientiertes Human Capital Management, Auflage 1, 2003, p. 52-74

In the first place the financial results of 30 randomly selected winning companies out of the “100 Best” were analysed and compared with 30 randomly selected companies which did not attend the Great Place to Work[®] Contests 2007 or 2009 out of the whole population of German companies (about 3 million), which are obliged to show their financial data in the “Elektronischer Bundesanzeiger”. With a random procedure the author selected 30 of about 200 companies which are in terms of turnover, number of employees and industry comparable with the Great Place to Work[®] companies.

Finally the results Great Place to Work[®] 2007, 2009 of a number of companies will be analysed and compared with the development of their company value in a validating research case study. In both chapters company size, structure and the branch they are engaged in, will be handled neutral but each of those companies employs less than 500 employees. For this validating research case study the author had no influence on the number of companies the Great Place to Work[®] Institute provided to him. The Great Place to Work[®] Institute tried to find companies, which attended both contests and also show their financial data in the “Elektronischer Bundesanzeiger”. These eleven companies employ more than 1000 employees together and have in sum a turnover about some 100 Mio €. That means that more than 1000 employees take place in the questionnaires of these selected companies.

Differences in behavior in the results have to be pointed out and potential for optimization has to be identified. This is followed by a theoretical check, if any of the different behavior can be copied and if this seems to be a way to get more successful. There should be a fixed definition of this “new” behavior. Second is to find a theoretical relation between company value and employee satisfaction, and possibilities to increase company value.

This chapter aims at the development of a theoretical cause-effect model, which explains the dependencies between employee satisfaction and its various elements (as the independent variable), and the company value, measured in various dimensions (as the dependent variable). This causal model serves as the theoretical platform for the basic hypothesis and the following empirical investigation.

2.1. The independent variable “Employee Satisfaction”

In order to give way to a sound operationalization of a cause –effect variable, indicators and measures have to be developed so that at least ordinal scales can be assigned and thus allow for empirical proof. The independent variable employee satisfaction will be measured with the results of the Great Place to Work[®] contest 2007 and 2009.

The empirical design and the statistical procedures for testing our hypotheses are based on various secondary and primary data sets which were made available by the various sources namely the GPTW Institute and the German Government “Elektronischer Bundesanzeiger“. Even though there were some data restrictions due to limited public availability the data sets allowed for a number of testing procedures, which are demonstrated in the following chapters. The goal is to identify the most relevant differences between the best and the worst firms, and, if possible, to verify processes to search for exactly these areas, which do make the difference, to find opportunities for optimization. The results from Great Place to Work[®] 2007 and 2009 have to be compared. The following questions have to be answered: What has changed from the first to the second study and did the company value increase? Is there any remarkable connection between these items? The main points of view in this context are leadership items and organisational culture like:

- **Credibility**: measures how employees see their managers in terms of confidentiality and reliability
- **Respect**: measures the degree how employees feel being respected from their managers
- **Fairness**: measures how employees feel being treated fair from their managers
- **Pride**: measures the solidarity from the employees to the team and the company
- **Camaraderie**: measures the quality of relationship between the employees.

Those elements create in general the theoretical outline to identify and operationalize the construct of employee satisfaction, developed in the Great Place to Work[®] Approach. Those theoretical elements are further explained in the following. It is especially determined to specify the composition of the influencing elements of employee satisfaction.

2.1.1. The five dimensions of a Great Place to Work

The Great Place to Work[®] Institute measures these five dimensions with a confidential questionnaire of about 60 questions which can be allocated to them. The Great Place to Work[®] Institute, Inc.²⁶⁸ is a research and management consultancy based in the U.S. with International Affiliate offices throughout the world. At the Great Place to Work[®] Institute, they have been listening to employees and evaluating employers since 1980, to understand what makes a workplace great. They know that the foundation of every great workplace is trust between employees and management. Their ongoing research, measurement tools, and educational services have made them leaders in helping build high-trust workplaces. In a great

²⁶⁸ www.greatplacetowork.de, www.greatplacetowork.com

workplace, according to the “Great Place to work” approach, trust manifests itself in every relationship. Managers believe that employees want to be productive, encouraging them to participate in the business. Employees are enthusiastic and passionate about their work and the company's mission. In a high-trust environment, people cooperate and collaborate, leading to positive workplace interactions, higher profits, and greater productivity. At the Great Place to Work[®] Institute, the employee-centered model has been recognized for more than 20 years as a clear, comprehensive representation of the importance of trust in creating great workplace relationships. Their approach, research on workplace practices, extensive database of Best People Practices, and underlying Great Place to Work[®] Model[©], all serve as the basis for their services aimed at optimizing a workplace environment through a focus on trust. The Great Place to Work[®] Institute brings together the expertise, methodological rigor, and proprietary tools that can help company turn their workplace environment into a powerful source of competitive strength - while creating collaborative, successful relationships among people at all levels of your organization. Building trust in relationships between employees and management helps your workplace to operate more effectively, serving as a source of enduring advantage for your organization.

In the following paragraph the five dimensions of a Great Place to Work[®] will be explained briefly. Trust is the essential ingredient for the primary relationship between the employee and the employer. According to their model, trust is composed of three dimensions: Credibility, Respect, and Fairness. The other two dimensions are pride and camaraderie.²⁶⁹

Credibility means managers regularly communicate with employees about the company's direction and plans - and solicit their ideas. It involves coordinating people and resources efficiently and effectively, so that employees know how their work relates to the company's goals. It's the integrity management brings to the business. To be credible, words must be followed by action.

Respect involves providing employees with the equipment, resources, and training they need to do their job. It means appreciating good work and extra effort. It includes reaching out to employees and making them partners in the company's activities, fostering a spirit of collaboration across departments and creating a work environment that's safe and healthy. Respect means that work/life balance is a practice, not a slogan.

Fairness: At an organization that's fair, economic success is shared equitably through compensation and benefit programs. Everybody receives equitable opportunity for recognition. Decisions on hiring and promotions are made impartially, and the workplace

²⁶⁹ www.greatplacetowork.de, www.greatplacetowork.com [2012]

seeks to free itself of discrimination, with clear processes for appealing and adjudicating disputes. To be fair, you must be just.

Pride relate to workplace relationships between employees and their jobs/company.²⁷⁰

Camaraderie relate to workplace relationship between the employee and other employees.

These five dimensions are based on the Great Place to Work[®] Model with its five dimensions, Trust, Respect, Fairness, Pride and Camaraderie.

In the following, the measurements of the indicators of the independent variable are pointed out in detail. These five dimensions are measured with two instruments. One is an anonym employee questionnaire which is directly delivered to the staff without any influence of the managers. The employees have to do it for themselves and send it directly back to the Great Place to Work[®] Institute. For controlling if the management do not influence the staff by giving their opinion, selective anonym telephone interviews are made directly with the staff. The 66 questions can be allocated to these five dimensions²⁷¹ shown in the following table:

²⁷⁰ www.greatplacetowork.de, www.greatplacetowork.com [2012]

²⁷¹ www.greatplacetowork.de, www.greatplacetowork.com [2012]

Table 2.1: 66 questions – GPTW five dimensions

Credibility	Respect
<ul style="list-style-type: none"> ▪ Management keeps me informed about important issues and changes. ▪ Management makes its expectations clear. ▪ I can ask management any reasonable question and get a straight answer. ▪ Management is approachable, easy to talk with. ▪ Management is competent at running the business. ▪ Management hires people who fit in well here. ▪ Management does a good job of assigning and coordinating people. ▪ Management trusts people to do a good job without watching over their shoulders. ▪ People here are given a lot of responsibility. ▪ Management has a clear view of where the organization is going and how to get there. ▪ Management delivers on its promises. ▪ My manager’s actions match his/her words. ▪ I believe management would lay people off only as a last resort ▪ Management is honest and ethical in its business practices. 	<ul style="list-style-type: none"> ▪ Management is honest and ethical in its business practices. ▪ I am offered training or development to further myself professionally. ▪ I am given the resources and equipment to do my job. ▪ I am able to make the best use of my abilities here. ▪ Management shows appreciation for good work and extra effort. ▪ Management recognizes honest mistakes as part of doing business. ▪ Management genuinely seeks and responds to suggestions and ideas. ▪ Management involves people in decisions that affect their jobs or work environment. ▪ This is a physically safe place to work. ▪ This is a psychologically and emotionally healthy place to work. ▪ Our facilities contribute to a good working environment. ▪ People here are supported by helpful measures in promoting health. ▪ I am able to take time off from work when I think it is necessary. ▪ People are encouraged to balance their work life and their personal life. ▪ Management shows a sincere interest in me as a person, not just an employee. ▪ We have special and unique benefits here.
Fairness	Pride
<ul style="list-style-type: none"> ▪ We have special and unique benefits here. ▪ People here are paid fairly for the work they do. ▪ I feel I receive a fair share of the profits made by this organization. ▪ Everyone has an opportunity to get special recognition. ▪ I am treated as a full member here regardless of my position. ▪ Promotions go to those who best deserve them. ▪ Managers avoid playing favourites. ▪ People avoid politicking and backstabbing as ways to get things done. ▪ People here are treated fairly regardless of their age. ▪ People here are treated fairly regardless of their race or ethnicity. ▪ People here are treated fairly regardless of their sex. ▪ People here are treated fairly regardless of their sexual orientation. ▪ People here are treated fairly regardless of disability. ▪ If I am unfairly treated, I believe I'll be given a fair shake if I appeal. 	<ul style="list-style-type: none"> ▪ If I am unfairly treated, I believe I'll be given a fair shake if I appeal. ▪ I feel I make a difference here. ▪ My work has special meaning: this is not “just a job”. ▪ When I look at what we accomplish, I feel a sense of pride. ▪ People here are willing to give extra to get the job done. ▪ I want to work here for a long time. ▪ I'm proud to tell others I work here. ▪ I would recommend the company as an employer to good acquaintances. ▪ I can highly recommend products and services of our company to potential clients. ▪ People look forward to coming to work here. ▪ I feel good about the ways we contribute to the community.
Camaraderie	
<ul style="list-style-type: none"> ▪ I feel good about the ways we contribute to the community. ▪ I can be myself around here. ▪ People celebrate special events around here. ▪ People care about each other here. ▪ This is a friendly place to work. ▪ This is a fun place to work. ▪ When you join the company, you are made to feel welcome. ▪ When people change jobs or work units, they are made to feel right at home. ▪ There is a “family” or “team” feeling here. ▪ We're all in this together. ▪ You can count on people to cooperate. 	

Source: www.greatplacetowork.de, www.greatplacetowork.com

After the employees have filled out these questionnaires the company has to collect them and send it back to the Great Place to Work Institute. After analysing the questionnaires every

attending company at the contest gets a feedback report from the Great Place to Work Institute of its results (see Appendix 1).

The second instrument in order to measure the elements of a “Great Place to Work (as the independent variable) is the culture audit. In the culture audit the companies have the possibility to make a presentation of their firm based on given questions. This information should give a quite objective overview about the company and the social facilities they have for their employees. Arrangements like kinder garden, fitness club or company excursions e.g. are evaluated by the Great Place to Work[®] Institute and lead to different ratings.

2.1.2. The Great Place to Work[®],s assessment criteria for the Culture Audit[©]

In the following, the Great Place to Work[®],s assessment criteria for the Culture Audit[©] are pointed out in detail. The responses in the Culture Audit[©] questionnaire will be assessed by the Great Place to Work[®] evaluation team on the basis of a set of selected criteria. The assessment process itself is based on the rating of each company in comparison with other benchmark companies participating in the study, under particular consideration of the sector in which they operate and company size. These assessments are in all cases comparative and not absolute. This approach accordingly takes into consideration the fact e.g. that the structures and conditions for HR operations available for larger companies may differ considerably from those at smaller companies and that different branches (e.g. due to the share of the workforce employed in the production area) are confronted by substantially different challenges. The important aspect for Great Place to Work[®] here is that a major factor in the assessment of a people-oriented workplace culture is not only the quantity of the measures, but also the quality of the programs that are actually implemented. The companies should focus on the following assessment criteria in their portrayal of the workplace culture:

- Variety of the measures: How many separate measures are implemented in the area in question and how broad is the spectrum of these measures?
- Originality of the programs: Are the measures specially sculpted to reflect the company’s individuality? Do they have a special character that images the “personality” of the company?
- Accessibility of the measures: Do all employees have access to the measures? Are any target-group-specific programs offered? Are the employees involved in the shaping or communication of the measures?
- Human Touch: Do the measures have a human or heartfelt flavor? How generous are the measures in the way in which they are arranged?

- Fundamental concept: Do the measures reflect the company's values, goals, and visions? Are they linked to each other within a coherent concept?²⁷²

From the approach described above, nine areas of successful workplace culture are determined. The examples given are designed to give a more exact idea of the aspects to which Great Place to Work[®] Germany attaches emphasis in the assessment. Ultimately the assessment of measures, programs, and concepts are based on comparisons with other companies in the competition (shown in Appendix 2).²⁷³

The first field of investigation is the recruitment process which plays an important role in every successful company. The recruitment process is divided in two fields. The first part is the hiring process and the second part is the process and the methods of integrating new employees in the organization. The process of hiring new employees explains the characteristics of the HR marketing organization and the recruitment methods that are employed:

- How do they attract the attention of potential new recruits to the company as an employer, e.g. in the form of an appealing home page for job applicants?
- How is the hiring procedure structured? Which special features characterize it, e.g. inviting the applicant to lunch?
- Which groups of people are involved in the hiring procedure (in the recruitment, the selection etc.)?
- Which measures do they take to make the hiring process transparent for the candidate?

The process of welcoming new employees explains the nature and variety of the measures and programs used to welcome and integrate new employees:

- Which specific methods and measures does the company use to establish contact with new employees and to welcome and integrate them, e.g. a welcome breakfast ...?
- How are new employees familiarized with their new job, e.g. by means of an initiation plan, regular feedback talks?
- Which groups of employees are involved in shaping the integration process, and which groups of employees/locations have access to integration measures?
- What measures does the company take to familiarize new employees with their company culture?

²⁷² www.greatplacetowork.de, www.greatplacetowork.com [2012]

²⁷³ www.greatplacetowork.de, www.greatplacetowork.com [2012]

The second part of investigation is called “inspiring” and analyses how the values, principles, mission and vision are transported to the staff. The subject of this analysis are the values and principles that are important orientation aids for shaping the work processes in the company as well as the nature and variety of the measures and programs used to communicate these values and principles:

- Which specific methods and measures are used to develop and transport the values and principles and to ensure their visibility?
- Which groups of employees are involved in the development of the company’s values and principles?
- How do they give their employees the feeling that their work is of special importance and is more than merely a job?²⁷⁴

Also a very important area in every company is the communication process. The third field of investigation, “speaking”, tries to evaluate the different methods and measures a company has installed for distributing information to their employees. The subject of this analysis is the nature and variety of the measures and programs used to communicate information to the employees regarding what’s going on in the company, the work situation, or other relevant issues:

- Which specific methods and measures are characteristic features of the company’s information policy, e.g. regular meetings, defined information rules, the use of special information media?
- How do you ensure that the information is made available to all employees, e.g. for groups of employees who are difficult to reach, such as sales reps or night-shift workers?
- How is information communicated in the company, e.g. personally, by e-mail?
- How are bad news handled and communicated?

The fourth subarea of the “culture audit” is “listening”, which is divided in three parts. The first part, „feedback” analyses the opportunities of the staff giving feedback to their supervisors or management. The second area analyses the possibilities and opportunities of the employees to give input about ideas and their workplace environment. And additional to that the instruments, measures and possibilities of the staff for addressing conflicts are analyzed. The process of “listening – feedback” is the analysis of the measures and programs used to give the employees the opportunity to provide feedback to their senior management.

²⁷⁴ www.greatplacetowork.de, www.greatplacetowork.com [2012]

Such HR instruments can be both formal (e.g. employee survey) as well as informal (e.g. a lived open-door policy) in their nature:

- Which initiatives are used to actively obtain the employees' feedback? Which specific methods and measures characterize the feedback culture in the company?
- What measures are used to involve the various employee groups in the feedback process?
- How is the cross-hierarchic exchange via formal instruments shaped?

The process of "listening – giving input" is the analysis of the measures and programs available to the employees to make their own suggestions and ideas and to become involved in shaping their workplace situation:

- Which specific methods and measures enable the employees to bring forward their own suggestions and ideas regarding their workplaces, e.g. idea management?
- Which groups of employees are enabled to bring forward their own ideas and suggestions?
- In which way does the company deal with ideas and suggestions submitted by their employees?

Finally the process of "listening to conflicts" tries to answer the following questions:

- In which way can employees address undesirable workplace situations or resolve conflicts with their manager(s)?
- Which instruments and measures are provided to the employees for support in resolving issues of conflict? ²⁷⁵

Also an important field of evaluation is the analysis of measures and programs and processes the company provides to the employees for recognition and appreciation. The subject of this analysis is the nature and variety of the measures and programs by which the employees are shown personal appreciation or recognition for good achievements and efforts. These can be both material and immaterial in their nature:

- For which kinds of effort/work is appreciation shown, e.g. for innovation, sales, long-term employment at the company, team behavior?
- Which specific measures and programs does the company use to show its appreciation and recognition to employees?
- Which groups of persons have the chance to be appreciated/recognized, and which ones the opportunity to show their appreciation of their colleagues? ²⁷⁶

²⁷⁵ www.greatplacetowork.de, www.greatplacetowork.com [2012]

²⁷⁶ www.greatplacetowork.de, www.greatplacetowork.com [2012]

Innovation and qualification are very important success factors in our modern business community. In the “culture audit” the Great Place to Work Institute tries to evaluate these measures and programs in the field “developing”. The subject of this analysis is the nature and variety of the measures and programs used to promote both the technical as well as the personal development of the employees:

- What are the salient features of your further training concept, e.g. individual development planning, internal training courses?
- Which groups of employees have access to the further training courses? Are any target-group-specific development programs offered?
- How is employee development promoted in the day-to-day work routine?
- Which measures are taken to enhance knowledge management?

The field of “work/life balance” and “health – caring”- is analyzed in the culture audit in a threefold manner.

The process of caring about “work/life balance” is the analysis of the measures and programs that are used at the company to promote the employees’ healthy work/life balance:

- Which specific measures and programs does the company offer its employees to achieve and maintain a good work/life balance?
- Which groups of employees have access to the measures and programs to promote a good work/life balance, e.g. employees with children (including parental leave), employees without children, senior management?

The process of “caring about health” is the analysis of the measures and programs the company uses to promote the employees’ health:

- Which specific measures and programs does the company offer its employees to promote their health, e.g. ergonomic workplace design, sports courses?
- Which groups of employees are entitled to take part in the health-promotion programs that are offered? Are there any specific programs offered for specific groups of employees, e.g. in the production area?
- How are the health-promotion measures and programs the company offers shaped, e.g. individual programs, institutionalized concepts, by analysis of demand?

The process of “caring about support in emergency situations” is the analysis of the measures and programs the company offers to cope with emergency situations, e.g. in the case of serious illness, excessive indebtedness, or special challenges in the private sphere.

- How are the specific measures and programs the company offers shaped, e.g. informal company culture, formal assistance programs?
- What are the specific features of the supportive measures in emergency situations, e.g. loans, special leave, individual consultancy?
- Which groups of employees have access to the measures and programs the company offers for support in emergency situations?

The analyses of celebrating achievements and promoting a sense of enjoyment in the daily work routine, as well as outside of the work environment is also a field of investigation in the culture audit. The subject of this analysis is the nature and variety of the measures and programs designed to foster cooperation among the employees and to promote a sense of enjoyment, both in the daily work routine as well as outside the work environment; in addition, the nature and variety of the opportunities the company offers to celebrate achievements and to communicate them, e.g. at the individual, the team, and the company level:

- Which events are celebrated in the company, and in what form?
- Which special opportunities does the company offer its employees to enhance the team spirit, both in the daily work routine as well as outside the work environment, e.g. culinary get-togethers or employees' leisure clubs?
- Which groups of employees have access to the measures you offer to enhance the sense of enjoyment and/or initiate measures of this kind themselves?
- Which measures do you take to give celebration events a company-specific flavor and take account of the employees' special wishes?
- How are the aspects of cooperation and communication among employees promoted?²⁷⁷

The last subarea of the culture audit is the investigation of the models of profit-sharing, bonuses, company stock shares and other possibilities for the staff to participate from the company success or to get involved in social or cultural activities. The process of “sharing the principle of fair give-and-take” is the analysis in which the company endeavors to fulfil the principle of fair give-and-take. Here we're particularly interested in learning about the various modules of your remuneration system (e.g. profit-sharing, bonuses, company stock shares etc.) that you think are particularly appreciated by their employees:

²⁷⁷ www.greatplacetowork.de, www.greatplacetowork.com [2012]

- Do you offer the employees special or one-off (social) benefits that make it readily clear that the company take care of their employees not merely as members of the work-force, but also beyond the employment context?
- Which groups of persons have access to the individual components of the remuneration scheme, e.g. shares in financial achievements and company stock?
- Does the company make endeavors that promote a sense of transparency and justice in terms of remuneration?

The process of “sharing and promoting social engagement” is the analysis of the measures and programs that the company offers to promote engagement in society in general, in the social, cultural, and environmental areas:

- What are the characteristic features of the company philosophy to promote social engagement, e.g. company-specific activities in the area of environmental protection, the promotion of science, or social projects?
- Which groups of employees are actively involved in the promotion of social engagement, which ones can initiate projects of this kind?
- What opportunities do the companies offer their employees to enable them to involve themselves for the common good, e.g. leave of absence for social activities?

Based on these two evaluations a Culture Audit –Score and a Trust Index-Score is computed. In connection with the comment score a final score is computed. This aggregated score is standardized with the statistical instrument of the z-transformation.²⁷⁸

The above paragraphs are determined to describe and to explain the dimensions of the Great Place to work concept, which serves as the independent variable of our theoretical model. In the following, the dimensions and the measures of the dependent variable of our theoretical model- the company value- will be pointed out in detail.

2.2. The dependent variable “Company Value”

The main goal of the dissertation is to prove that there is an evident relation between employee satisfaction and company value. Therefore it is necessary to calculate the company value for those 30 companies which are among of the 100 best in the Great Place to Work[®] Contest 2007 or 2009 and other randomly selected companies which did not compete in one of these both contests.

²⁷⁸ www.greatplacetowork.de, www.greatplacetowork.com [2012]

Basically, there is a myriad of concepts existing in the scientific and research literature of management, business administration and economics, concerning the theoretical notion and potential measures of “business success” resp. “economic success” resp. “management success”. It is common sense of all those concepts that ultimately elaborate factors of “success” have to be developed in order to formulate and to test theoretical cause-effect models, dealing with the generic economic hypothesis of input- output comparison, productivity measurement, profitability measurement, managerial efficiency, leadership performance etc. Ultimately, given the understanding that economic variables are supposed to produce quantitative “results”, a predominant instrument of business success measurement can be seen in the construct of “company value”. In general terms, the company value notion ought to represent the performance of a firm within a specific period by quantitative figures. Again, various models of the computation do exist, using measures focusing on sales and costs resp. cash inflows and cash outflows. In order to operationalize our dependent variable “company value” we refer to those measures in the following.

First of all the author will do some theoretical framework for explaining the different possibilities for calculating company value. The models will be theoretically introduced and explained. Depending on the application or terms of use the different models have advantages or disadvantages. The main issue in this case will be the availability of necessary data.

2.2.1. The discounted cash-flow-model

For computing the different company values the **Discounted-Cash Flow-Model**²⁷⁹ can be used. A firm’s value is determined by its ability to generate cash flow, both now and in the future. The DCF-Method computes company value by discounting cash flows.

Therefore DCF-Methods use a risk adjusted interest rate the discounted cash flows can be seen as future values^{280 281}. For this method future planning data is necessary to compute real and acceptable results. This approach focuses on the determination of future cash flows.

The **DCF-Method** allows defining free cash flows by considering planned dividend payout. The Cash Flow can be generated as follows^{282 283 284 285 286 287 288 289 290 291 292}:

²⁷⁹ various authors, e.g. Kruschwitz, L. & Loeffler, A. (2006). Discounted Cash Flow: A Theory of the Valuation of Firms. The Wiley Finance Series. John Wiley & Sons

²⁸⁰ Ballwieser, W. (1998). Unternehmensbewertung mit dem Discounted Cash-Flow-Verfahren. WPG. p. 82

²⁸¹ Baetge, J., Niemeyer, K. & Kümme, J. (2001). Darstellung der Discounted-Cashflow-Verfahren (DCF-Verfahren) mit Beispiel. In v. Peemöller & Volker H. (Hrsg.). Praxishandbuch der Unternehmensbewertung. Berlin: Herne. p. 278

²⁸² 1DW ES 1 i.d.F. 2007, Tz. 127

Formula 2.1: Computing cash flow

	Annual profit after taxes
+	Dept Interest
-	Tax shield
-	Personal taxes of owners
+	Depreciation
-	Invalid payment earnings
-/+	invest payouts/ incoming payments of disinvestments
+/-	Decrease / increase of net current assets
<hr/>	
=	Cash Flow

Source: Ballwieser 1993, Meyersiek, 1991

A practical method for generating the cash flow²⁹³ based on available data:

Formula 2.2: Practical method for computing cash flow

	Annual profit after tax
+	Depreciation
+	Dept interest
-/+	invest payouts/ incoming payments of disinvestments
<hr/>	
=	Cash Flow

Source: Zieger Thomas, Moore Stephens KPWT AG

This method maybe can be the preferred to be used for calculating and comparing the different company values, but also in for this calculating method, future planning material is necessary.

The figure 2.1. shows an exemplary calculation of the equity value with the DCF method.

²⁸³ Meyersiek, D. (1991). Unternehmenswert und Branchendynamik. In: BFuP 43. pp. 233-240

²⁸⁴ Copeland, T., Koller, T. & Murrin, J. (2000), p. 3

²⁸⁵ Ballwieser, Wolfgang (1993): Methoden der Unternehmensbewertung. In: Gebhardt, G., Gerke, W. & Steiner, M. (Hrsg.): Handbuch des Finanzmanagements: Instrumente und Märkte der Unternehmensfinanzierung. München: Beck. pp. 151/164

²⁸⁶ Ballwieser, W. (1998). Unternehmensbewertung mit dem DCF-Verfahren. WPg 1998. pp. 81/86

²⁸⁷ Helbling C. (1993). DCF-Methode und Kapitalkostensatz in der Unternehmensbewertung. In: Der Schweizer Treuhänder (4/1993). pp. 108

²⁸⁸ Richter, F. & Simon-Keuenhof, K. (1996). Bestimmung durchschnittlicher Kapitalkostensätze deutscher Industrieunternehmen - Eine empirische Untersuchung. In: BFuP, 48. Jg. pp. 698 - 708

²⁸⁹ Coenberg & Schultze (2009). Fn. 537.. pp. 269/276-279

²⁹⁰ Baetge, Niemeyer & Kümmel (2011). Fn. 349. pp. 263/281, 324

²⁹¹ Richter, F. (1997). DCF-Methoden und Unternehmensbewertung: Analyse der systematischen Abweichungen der Bewertungsergebnisse. In: ZBB 1997. pp. 268

²⁹² Kußmaul, H. (1996). Gesamtbewertung von Unternehmen als spezieller Anwendungsfall der Investitionsrechnung. In: StB 1996. pp. 332/337

²⁹³ Ziegler T. WP/StB, Moore Stephens KPWT AG, München

Computing corporate value with the DCF method

Computing of the discounting factors	2006	2007	2008	2009	2010
year	1	2	3	4	5
discounting factors	1.0000	0.9116	0.8310	0.7575	0.6905
(4) Calculating end value					370
Cash flow in the 5. Year					10.3093
Capital value factor					3.814
Rest value (annuity)					3.814
(5) Calculating capital value					
	2006	2007	2008	2009	
Cash-Flow	430	370	410	370	
discounting factor	1.0000	0.9116	0.8310	0.7575	
Discounted Cash Flow (DCF)	430	337	341	280	
sum of Discounted Cash Flows					1.388
Rest value off 5. Year					3.814
discounting factor					0.6905
Capital value of rest value					2.634
(6.1) company value (1)					4.022
Depts					2.022
not operating assets					0
(6.2) equity value (2)					2.000

Figure 2.1: Corporate values DCF

Source: Ziegler Thomas, Moore Stephens KPWT AG

The model demonstrated above is one common approach for the measurement of the company value. A further one is outlined in the following.

2.2.2. Concept of weighted average cost of capital

The concept of “**Weighted Average Cost of Capital**” (WACC) also known as **Entity-concept**, the cash flow show the surplus of cash which is available for shareholders and outside creditors.²⁹⁴

There are also some different approaches but overall they lead to similar results²⁹⁵.

The total capital value of a company with the WACC-concept is a result of discounting free cash flows.^{296 297 298} These can be set as a constant or estimated in the phase model to the planning horizon.^{299 300 301} For the following phase a Residual-value based on simple

²⁹⁴ WP-Handbuch (2012). Düsseldorf: IDW Verlag

²⁹⁵ Various authors

²⁹⁶ Ballwieser, W. (1993). Methoden der Unternehmensbewertung. In: Gebhardt, G., Gerke, W. & Steiner, M. (Hrsg.). Handbuch des Finanzmanagements: Instrumente und Märkte der Unternehmensfinanzierung. München: Beck. pp. 151/164

²⁹⁷ Bender, J. & Lorson, P. (1997). Verfahren der Unternehmensbewertung. Discounted-Cash-Flow-Verfahren und Anmerkungen zu Shareholder-Value-Konzepten. In: BuW 51 (1997). p. 1

²⁹⁸ Ballwieser, W. (1998). Unternehmensbewertung mit dem Discounted Cash-Flow-Verfahren. WPG. p. 81/85

²⁹⁹ Rappaport, A. (1999). Shareholder-Value: ein Handbuch für Manager und Investoren. Stuttgart: Schäffer-Poeschel (Fn. 284). pp. 40

³⁰⁰ Bühner, R. & Weinberger, H.-J. (1991). Cash-Flow und Shareholder Value. In: BFuP 43. pp. 187/192

³⁰¹ Volkart (1997). ZfB-Ergänzungsheft (2). pp. 105/106

assumptions is determined.^{302 303} For generating the total market value of a company the net present value of the not operating assets of a company is to be added.³⁰⁴

The market value of a company based on the “Phase Model”. The Cash-Flow of the period T+1 is representing the planned eternal annuity for the regarded period:

Formula 2.3: Market value of total capital

$$\frac{G}{K} = \sum_{t=1}^T \frac{FCF_t}{(1+WACC)^t} + \frac{RW}{(1+WACC)^T} + \frac{NB}{V}$$

Source: Copeland/Koller/Murrin (Fn. 284), Rappaport (Fn. 284)

GK	=	Market Value of total capital
FCF	=	Free Cash Flow
t	=	Time index
T	=	Duration of the planning period
WACC	=	Weighted average cost of capital
RW	=	Residual Value
NBV	=	Present Value of not operating assets

In a second step the complete capital value has to be divided to equity and dept. The market value of the debt can be computed by discounting the cash flows to the outside creditors with a risk adjusted interest rate. The difference between complete capital value and market value of the debt is the **market value of equity which means company value.**³⁰⁵

Also for this method future planning data is necessary to compute real and acceptable results. The major difference between the discounted cash flow model and the weighted average cost of capital model can be seen in a slightly different evaluation of investment opportunities. Whereas the discounted cash flow model emphasizes the liquidity flow of business operations, the concept of weighted average cost of capital particularly refers to the so called free cash flows, which may be used for various investment opportunities.

In the end, both approaches clearly demonstrate, whether the underlying business operations have ultimately created surpluses or losses in terms of sales and costs resp. revenues and expenditure.

Finally, another model for calculating the company value is introduced in the following.

³⁰² Copeland, Koller, Murrin (Fn. 284), p. 186, ferner Tz. 355 ff.

³⁰³ Rappaport, A. (1999). Shareholder-Value: ein Handbuch für Manager und Investoren. Stuttgart: Schäffer-Poeschel (Fn. 284). pp. 40, 48-56

³⁰⁴ IDW ES 1 i.d.F. (2007). Tz. 86. Tz. 355 ff.

³⁰⁵ IDW ES 1 i.d.F. (2007). Tz. 126

2.2.3. Corporate value model

The **Corporate Value Model**³⁰⁶ also based on the WACC is nearly the same for generating company value:

Market value of company = V_{Company} = PV* of expected future free cash flows
 (* Present value)

Formula 2.4: Present value

$$PV = \frac{FCF_1}{(1+WACC)^1} + \frac{FCF_2}{(1+WACC)^1} + \frac{FCF_\infty}{(1+WACC)^\infty}$$

Source: Brigham & Huston (2004)

To find a company's cost of capital, we need to calculate the weighted average of the costs of different sources of financing. The weights we use reflect the proportion of these sources of financing that a company uses, or that it plans on using going forward (e.g., target debt-equity ratio). The **WACC** is calculated as:

Formula 2.5: Weighted average cost of capital

$$WACC = (E/(D + E)) * r_E + (D/(D + E)) * r_D * (1 - T_C)$$

Source: Ballwieser, 1993

Where

- D is the value of Debt
- E is the value of Equity
- r_D is the cost of debt
- r_E is the cost of equity
- T_C is the corporate tax rate
- $r_D (1 - T_C)$ is the "after-tax" cost of debt

- The appropriate cost of debt is the after-tax yield on the company's debt.
- The best way to compute cost of equity is to assess the risk premium that shareholders require.
- Future planning material is required.

Or:

Formula 2.6: Weighted average cost of capital

$$WACC = r_{\text{Equity in debt}} \cdot \frac{nSt \cdot EK}{GK} + R_{FK} \cdot \left(1 - S \cdot \frac{U/E}{FK}\right) \cdot \frac{FK}{GK}$$

Source: Ballwieser, 1993

³⁰⁶ Brigham E. F. & Huston J. F. (2004). Fundamentals of Financial Management. Tenth Edition. Thomson / South Western. pp. 326 f.

WACC	=	Weighted average cost of capital
FK	=	market Value of dept
'FK	=	from the market expected dept interest
$S = \frac{U/E}{FK}$	=	discharge of dept from corporate tax and personal tax

Whereas the concept of weighted average cost of capital is aiming at the computation of the market value of total capital, the corporate value model utilizes the “classical” present value of future free cash flows. This means that the future market value is discounted to the present situation, applying adequate discounting interest rates, mostly oriented at the long term cost of capital. Even though both approaches are using nearly identical calculations, the final results can be differentiated into “future values” and “present values”.

For the first three models introduced, future planning data would be required. Since planning data are mostly internal data of the companies, which are generally not publicized, it is very often difficult or impossible to gain those data. This is the reason, why in this study the fourth model (described in the following) is mainly used for the measurement of the dependent variable “company value”. Even though ideally the EBIT-multiple model would also require future data, it is possible to develop those data by an extrapolation of EBIT data from the past.

2.2.4. The EBIT-multiple model

The **EBIT-Multiple Model** is a simple model used very often in M&A Transactions for computing a rough but also reliable company value.

The basic principle itself is simple - based on sustainable EBIT (earnings before interests and taxes) a company value is computed by multiplying EBIT with an industry typical multiplier. Additionally at a price indication the so-called net financial debts are reducing the purchase price and the stock of cash or cash equivalents will be higher the purchase price or so called “Equity Value”. This is to take account of the individual financial structure of the company at the transaction date, i.e. for example, that the higher liquidity from retained earnings enhance the purchase price.

Table 2.2: Sample calculation for “Equity Value”

	amount per thousand €
Earnings before taxes	3.000
- interest income	-50
+ interest expense	550
= EBIT	3.500
x industry typical multiplier	6
= company value	21.000
- bank debts	-2.500
- additional interest bearing debts (e.g. mezzanine)	-5.000
+ cash resources (fixed deposits, cash, etc.)	500
(subtotal net financial indebtedness)	(7.000)
= purchase price / equity value	14.000

Source: HJK Management Consultancy

The multipliers themselves are usually derived empirically from transactions made by major investment banks and consulting firms or the business press as well. Listed companies also offer through its disclosure requirements, the possibilities to derive on the basis of published budgets and the stock market values the corresponding multiplier. The multipliers vary widely from industry to industry and thus reflect the general expectations of the future for that industry again. Therefore they reflect to medium-term fluctuations. How far a particular company's EBIT multiplier at the top or bottom of the range applies, depends on multiple and sometimes subjective factors.

Representatives mentioned:³⁰⁷

- **Market:** competitive position, market coverage, strategic positioning, general firm size, etc.
- **Product and range of power:** product range and depth, R & D, Technology, New Products, USP, flexibility, dependence on suppliers, etc.
- **Customer structure:** regional distribution, industry mix, ABC-profile economic performance of key accounts, etc.
- **Management/Organization:** sustainability of the management or the workforce, personnel, loyalty/employee turnover, flexibility, particularly in post-merger issues, etc.
- **(Economic) Risk Profile:** investment requirements, risk of default / processes, capital requirements, tax position, ownership structure, anticipated changes in legislation, environmental risks, customer structure (regional, industries), management and shareholder structure.

³⁰⁷ HJK Management Consultancy, www.hjk-mc.de [2012]

In the Mergers and Acquisition business different sizes of companies have different multiples.

Small-Cap: Turnover < 50 Mio €

Mid-Cap: Turnover 50-250 Mio €

Large-Cap: Turnover > 250 Mio €

The table below shows the EBIT of multiples of their respective industries.

Table 2.3: EBIT and turnover multiples for computing company value, May 2011

Industry	Stock-Multiples		Expert-Multiples Small-Cap				Expert-Multiples Mid-Cap				Expert-Multiples Large-Cap			
	EBIT Multiple	Turn-over Multiple	EBIT-Multiple		Turnover Multiple		EBIT-Multiple		Turnover Multiple		EBIT-Multiple		Turnover Multiple	
			From	till	from	till	from	till	from	till	from	till	from	till
Consulting	-	-	5,7	7,4	0,57	0,94	6,5	8,7	0,66	1,12	7,0	9,1	0,69	1,35
Software	13,1	2,48	6,1	7,9	0,67	1,05	6,6	8,4	0,73	1,19	7,1	9,0	0,82	1,45
Telecommunication	16,1	1,37	5,5	7,8	0,62	1,06	6,0	8,2	0,71	1,18	6,5	8,9	0,78	1,40
Media	9,8	1,47	5,9	7,7	0,64	1,19	6,6	8,4	0,81	1,46	7,1	9,3	0,95	1,67
Trade and e-Commerce	12,0	1,27	5,1	7,8	0,49	0,99	5,9	8,3	0,53	1,05	6,6	9,5	0,61	1,41
Transport, Logistic and Tourism	11,3	1,69	4,9	6,9	0,53	0,94	5,6	7,7	0,61	1,03	6,3	8,9	0,59	1,26
Electronics	8,6	2,34	5,0	7,0	0,51	0,91	5,5	7,6	0,61	1,03	6,2	8,0	0,69	1,15
Vehicle production and-equipment	12,3	0,95	4,8	6,4	0,39	0,68	5,2	7,1	0,44	0,80	5,9	8,0	0,5	0,89
Machinery and Plant-engineering	14,1	1,07	5,3	6,9	0,48	0,69	5,6	7,4	0,54	0,86	6,2	8,4	0,62	1,07
Chemistry and Cosmetics	11,2	1,44	5,9	8,0	0,52	0,85	6,4	8,8	0,61	1,00	6,9	9,7	0,63	1,17
Pharmacy	9,9	1,15	6,1	8,5	0,74	1,32	6,8	9,3	0,73	1,67	7,3	9,9	0,88	1,82
Textile	11,3	1,08	4,6	6,2	0,42	0,64	5,2	7,0	0,51	0,77	5,7	7,6	0,58	0,88
Food	12,5	0,85	5,4	7,2	0,48	0,82	6,0	7,9	0,59	0,97	6,9	8,9	0,67	1,11
Gas, Power and Water	6,6	0,69	5,7	8,2	0,58	0,98	6,3	8,6	0,77	1,07	56,7	9,2	0,84	1,3
Environmental Technology	-	-	5,6	8,0	0,61	1,01	6,4	8,7	0,69	1,21	6,6	9,4	0,77	1,36
Construction and Craft	11,8	0,90	4,0	5,4	0,35	0,56	4,6	5,8	0,41	0,66	4,8	6,4	0,46	0,79

Source: HJK Management Consultancy, <http://www.hjk-mc.de/> [May 2011]

It is easy to see that it is the positioning of the entity within the spectrum of industry-EBIT multipliers allows room for interpretation and therefore also makes very good use as a negotiating tool as well. The business valuation via EBIT multiples generally offers the advantage that, contrary to other policies, the "reality factor" prevails. Not infrequently, the

EBIT multiplier is an essential subject of the purchase price formula in the transaction agreements.³⁰⁸

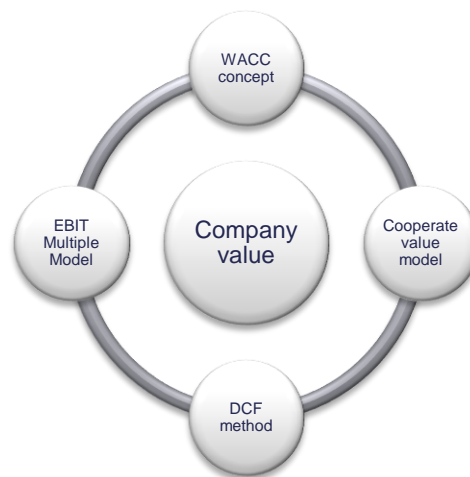


Figure 2.2: Company Value Models

Source: Ballwieser 1993; HJK Management Consultancy; Ziegler Thomas, Moore Stephens KPWT AG

The Figure above gives an overview about possible calculation methods for computing the equity value. It depends on the data availability which model is appropriate and fits best. In practical use and in daily business EBIT multiples are used very often and even though no future planning material is available the company or equity value can be roughly computed.

2.3. Summarizing explication of the theoretical model and basic hypothesis

In the chapters 2.1. and 2.2. above the independent and dependent variable of our cause effect model were pointed out in detail, and the theoretical foundations of how to measure the variables and how to develop relevant indicators were described and explained. In reference to the main research question of this study, the author can now summarize the theoretical model, leading to the basic hypothesis of the dissertation: **Employee satisfaction has an impact on the level of company value.**

Specifically the basic hypothesis can also be transferred into the following cause-effect relation: **The higher the degree of employee satisfaction, the higher the level of company value.**

In all likelihood, there will not be a linear relationship between employee satisfaction and company value. This is why the empirical investigation for testing the basic hypothesis is conducted. The empirical data are supposed to show the strength and the direction of the relationship between employee satisfaction and company value. Also the data will show the

³⁰⁸ HJK Management Consultancy, www.hjk-mc.de [2012]

weighted impact of the independent variable on the variation of the dependant variable, meaning that not just employee satisfaction has an impact on company value, but also some other variables, like i.e. the author shows in the first chapter page 28 and in the third chapter on page 119.

The following figure is determined to emphasize the underlying theoretical cause-effect relations in sum:

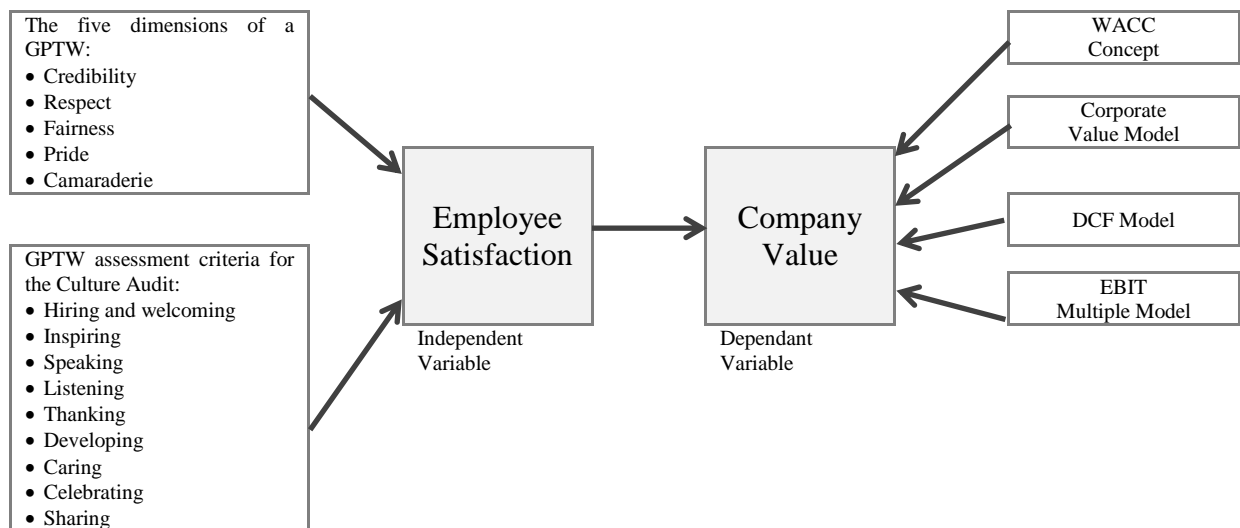


Figure 2.3: Cause Effect Relations

Source: www.greatplacetowork.com, Ballwieser 1993, designed by H.-J. Brenninger

Finally the author adds some remarks to also underline the practical implications of our theoretical model. Company managers usually cannot influence circumstances in the environment, but they can influence conditions inside the company. One of the most important factors is the human resources. How contented are employee's with their working conditions? What kind of emotional climate does one have in the group? Leadership style seems to be an important factor that determines whether activities are successful or not. Science supports this theory. For example Lutz v. Rosenstiel³⁰⁹ or Fredmund Malik³¹⁰ argues that there is a very strong relation between those factors. Numerous studies and articles^{311 312}

³⁰⁹ Rosenstiel von, L. (2003). Motivation managen. Weinheim, Basel, Berlin: Beltz Verlag. pp. 52

³¹⁰ Malik, F. (2006). Führen, Leisten, Leben. Frankfurt / New York: Campus Verlag. pp. 65

³¹¹ Hinterhuber, H. (1990) Wettbewerbsstrategie. 2. Auflage. Berlin / New York: DeGruyter. pp. 50

³¹² Kölb, C. (2009). Konzeption eines Kennzahlensystems für das strategische Personalcontrolling, EFQM-Modell, Scandia Navigator. Hamburg: Verlag Diplomica. pp. 38-39

³¹³ ³¹⁴ support the idea that there exists a link between employee satisfaction and customer satisfaction, leadership, productivity, and financial results.

In the first chapters the author worked through a lot of papers, articles and books which gave evidence about this relationship. Now based on a secondary data analysis which is done in the USA some additional analysis based on the German labor market will be done to consolidate this hypothesis.

³¹³ Baldrige, M. Natural Quality Award. Australian Quality Award. <http://www.enotes.com/management-awards-reference/management-awards>

³¹⁴ Wissensbilanzen (2009). Great Place to work - study. Innsbruck: Universität Innsbruck

3. EMPIRICAL INVESTIGATION INTO THE RESEARCH HYPOTHESIS “EMPLOYEE SATISFACTION AS THE INDEPENDENT VARIABLE HAS AN IMPACT ON THE LEVEL OF COMPANY VALUE AS THE DEPENDANT VARIABLE”

The third chapter “Empirical investigation into the research hypothesis”, is based on a secondary data analysis from the USA. Additionally the financial results of 30 randomly selected companies which attended the Great Place to Work[®] Contest in Germany 2007 and 2009 were analyzed and these financial results compared with 30 randomly selected “normal” German companies, which did not attend these contests. In a primary statistical analysis based on real world data the basic hypothesis will be tested.

Before starting with the empirical and statistical procedures some theoretical framework will be done by reflecting to each of these methods.

3.1. Prior research findings and secondary data analyses summary

The following references concerning third party researchers’ studies and investigation into employee satisfaction and company value issues are supposed to outline and summarize their most contributing theoretical and empirical elements for the author’s research questions and hypotheses of the dissertation. Those research works have been used as a basis for our own empirical research.

Ingrid Smithey Fulmer from the Edi Broad Graduate School of Management Michigan State University, Barry Gerharad from the School of Business University of Wisconsin-Madison and Kimberly S. Scott from the Wm. Wrigley Jr. Company did a very interesting study named: “Are the 100 best better? An empirical investigation of the relationship between being a Great Place to Work[®] and firm performance”.

They argued that positive employee relations effectively serves as an intangible and enduring asset, and may, therefore, be a source of sustained competitive advantage at the firm level. They surveyed a number of measures of firm-level performance and conceptualize how each measure is likely to be affected by highly positive firm-level employee relations. They then empirically investigated whether positive employee relations is related to firm performance, focusing on publicly traded firms included in the “100 Best Companies to Work for in America.” The relative performance of these “Best Companies” is examined via comparisons to both companies in the broad market and a group of matched firms. Their analyses

suggested that companies on the “100 Best List” enjoy not only stable and a highly positive workforce attitudes, but also performance advantages over the broad market, and in some cases, over matched group.³¹⁵

In “Competitive Advantage”, Michael Porter noted that “Human resource management affects competitive advantage in any firm, through its role in determining the skills and motivation of employees” and that “In some industries, it holds the key to competitive advantage”³¹⁶. The growing importance of good employee relations is underscored by the suggestion that firms disclose information on employee attitudes in their financial reports³¹⁷. Similarly, strategy tools such as the “Balanced Scorecard”³¹⁸ presuppose that tomorrow’s financial performance depends to an important degree on how well internal business processes are managed, including the relationship with employees. Indeed, McKinsey & Company’s study of nearly 6.000 managers concluded that “talent” will be the most important firm resource over the next 20 years.³¹⁹

Growing competition for talented workers has given firms added incentive to review their employee relations strategies in order to more effectively attract, motivate, and retain the type of workforce that will help them be successful³²⁰. Such efforts typically include benchmarking against companies that are considered to be leaders in employee relations, such as those included in Fortune magazine’s annual list of “100 Best Companies to Work for in America”³²¹. The wisdom of benchmarking against firms like those on the “100 Best List” depends on the validity of two assumptions: First that companies on the “100 Best List” really do have “better-than-average” employee relations, and, second, that strong employee relations are indeed beneficial to the organization. In their study Ingrid Smithey Fulmer, Barry Gerhard and Kimberly S. Scott established three hypotheses:³²²

Hypothesis 1: Companies included on the “100 Best List” will exhibit stable levels of positive employee attitudes over time.

³¹⁵ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p.56, pp. 965-993

³¹⁶ Porter, M. (1985). *Competitive Advantage*. Free Press. p. 43

³¹⁷ Litan R.E, 2000, Corporate disclosure in the internet age, *Financial Times* 15

³¹⁸ Kaplan R.S., Norton D.P. (1992). The balanced scorecard – Measures the drive performance. *Harvard Business Review*. pp. 71-80

³¹⁹ Fishman C. (1998). The war for talent. *Fast Company*. Retrieved July 9 2002. form www.fastcompany.com/online/16/mckinseyhtml.

³²⁰ Gubman E. (1998). *The talent solution*. New York: McGraw Hill

³²¹ Levering R. & Moskowitz M. (1998). The 100 best companies to work for in America. *Fortune*. pp. 85-95

³²² Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p.56, pp. 965-993

Hypothesis 2: Companies included on the “100 Best List” will exhibit better performance relative to other companies because of their emphasis on employee relations.

Hypothesis 3: The superior performance of “100 Best Firms” relative to other companies as captured by ROA will be more persistent over time than superior performance as measured by market-to-book value of equity or by annual stock returns.

Firm performance measurement:

The January 12, 1998 Fortune article “The 100 Best Companies to Work for in America”³²³ was the source of the “best companies” that are the focus of this study. Two hundred thirty-eight companies were invited to submit information supporting inclusion in the “100 Best”. This particular group was selected by Levering and Moskowitz, from their own “database of more than 1,000 companies” because they met certain minimum criteria (firms had to have been in existence for at least ten years and employ a minimum of 500 people) and because they were considered the “most viable candidates for the list”. Of those invited, 161 agreed to participate.

Employee attitude measurement:

The majority of employee survey questions used in selecting the 1998 “100 Best List” were created and administered by the Great Place to Work[®] Institute of San Francisco and this instrument is referred to as the Great Place to Work[®] Trust Index[®]. Their Web site (www.greatplacetowork.com) describes a number of sample items from the survey along with the dimensions they are intended to capture. They used the “100 Best List” as a starting point for their analyses of financial performance; they eliminated privately held companies, nonprofit organizations, public utilities and financial institutions from their analysis. The first two categories were excluded due to the no availability of financial information and stock returns data. The latter two categories are commonly either excluded or examined separately in studies of financial performance in corporate finance (e.g., Loughran & Ritter, 1997)³²⁴ primarily because firms in these industries use different financial reporting practices, rendering some of their financial performance measures incomparable to those of other firms. In one case, a company included on the “100 Best Companies List” was not publicly traded but was a division of a firm that was. Because the division contributed substantially to the overall sales of the parent (over 60% of total sales was from this division), they substituted the parent company in the analysis. To be included in the study, they required that each of the

³²³ Levering R. & Moskowitz M. (1998). The 100 best companies to work for in America. Fortune. pp. 84

³²⁴ Loughran, T. & Ritter, J.R. (1997). The operating performance of firms conducting seasoned equity offerings. Journal of Finance 52. 1823-1850

“100 Best” companies have Compustat data available in the matching year (1997, the year prior to publication) to facilitate selection of a matching company. The final sample of Fulmer, Gerhart and Scott consisted of 50 companies from the January 1998 “100 Best List”. Figure 3.1. describes the industry breakdown of firms included in this study.

Table 3.1: Best companies included in study by industry classification³²⁵

Industry	Number of companies in industry
Food and kindred products	4
Chemicals and allied products	6
Stone, clay, glass and concrete products	2
Industrial and commercial machinery and computer equipment	8
Electronic and other electrical equipment/components, except computers	6
Business services	7
Other	17
Totals	50

Source: Smithey Fulmer Ingrid, 2003

To select a set of firms with which to compare the “100 Best Companies”, they adapted a control firm matching procedure suggested by Barber and Lyon (1996, 1997) and used by Loughran and Ritter (1997). The goal of this procedure was to find for each “100 Best Company” a comparison firm that was the closest suitable match, given a set of constraining criteria. Like the “100 Best”, matching firms could be listed on the NYSE, the AMEX, or NASDAQ. Fulmer, Gerhart and Scott required that matching firms not ever been on any annual list of “100 Best Companies”, up through and including the January 2000 list. The primary criteria used to select company matches were industry, size and operating performance in the matching year. Potential matches were first chosen based on industry and size; the final match was then chosen from the resulting pool based on operating income (the firm with the closest operating income to the target in the matching year was selected as the matched firm.^{326 327 328 329}

³²⁵ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p. 974

³²⁶ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p.56, pp. 974-975

³²⁷ Loughran, T. & Ritter, J.R. (1997). The operating performance of firms conducting seasoned equity offerings. *Journal of Finance* 52. 1823-1850

³²⁸ Barber, B. & Lyon, J. (1996). Detecting Abnormal Operating Performance: The Empirical Power and Specification of Test Statistics. In: *Journal of Finance Economics* 41 (3). Pp. 359-399

³²⁹ Barber, B. & Lyon, J. (1997). Detecting Long-Run Abnormal Stock Returns: The Empirical Power and Specification of Test Statistics. In: *Journal of Financial Economics* 43 (3). Pp. 341-372

In their study Ingrid Smithey Fulmer, Barry Gerhard and Kimberly S. Scott elaborated the results and pointed out some issues for discussion and future directions:³³⁰ They found that organization-level employee attitudes of the “100 Best Firms” are both highly positive and stable over time (supporting Hypothesis 1), bolstering the case for the characterizations of positive employee relations as strategic assets as described in the strategic management literature. Then they found that accounting ratios (ROA and market-to-book value of equity) of publicly traded companies included on the “100 Best List” are generally better than those of a matched comparison group, supporting Hypothesis 2 and establishing a link between employee attitudes and organization-level financial performance, which has previously been unstudied. As for stock returns, they found that the “100 Best Companies” outperform the broad market when considering cumulative (longer-term) returns, though not consistently for annual returns. They did not find that the “100 Best” significantly outperform their matched peers in most annual return comparisons other than 1998; they do outperform their peers in the 1995 – 1997 cumulative return period. Taken together, these results suggest that “100 Best Companies” are able to successfully manage relationship with multiple stakeholder groups³³¹, in this case, both employees and shareholders. At a minimum, these companies are able to create attractive workplaces without hurting the bottom line, and in many cases the “100 Best” exhibit superior performance. Their hypothesis that different measure of performance would be affected differently over time is partially supported (Hypothesis 3).

For example, although the high performance / high involvement work systems paradigm³³²
³³³ ³³⁴ has identified a range of HR practices that may be beneficial; there is a lack of consensus regarding which of these practices in most relevant.³³⁵ ³³⁶ ³³⁷

Managerial implications and implications for further research:

³³⁰ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p.56, pp. 965-993

³³¹ Jones T.M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review* 20. pp. 404-437

³³² Batt R. (2002). Managing customer services: Human resources practices, quit rates and sales growth. *Academy of Management Journal*. 45. pp. 587-297

³³³ Ichniowski C., Shaw K. & Prennushi G. (1997). The effects of human resources management practices on productivity: A study of steel finishing lines. *The American Economic Review*. 87 (3). pp. 291-311

³³⁴ MacDuffie J.P. (1995). Human resources bundles and manufacturing performance: Organizational logic and flexible production systems in the word auto industry. *Industrial and Labor Relations Review*. 48. pp. 197-221

³³⁵ Becker B. & Gerhard B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal*. 39. pp. 779-801

³³⁶ Godard J. & Delaney J.T. (2000). Reflections on the “high performance” paradigm’s implications for industrial relations as a field. *Industrial and Labor Relations Review*. 53. pp. 482-502

³³⁷ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. *Personnel Psychology*. p.56, pp. 965-993

- This study gives evidence that employee satisfaction leads to better company performance and financial results, therefore managers have to give their employees a workplace environment which leads to staff satisfaction.
- This research was made in the United States; therefore managers have to verify if these methods also fit to their country and culture where their company is located.

In the article “Are the Great Places to Work also Great Performers?” Eric J. Romero, University of Texas - Pan American analyzed the study of Ingrid Fulmer of Michigan State University, Barry Gerhard of the University of Wisconsin-Madison, and Kimberly Scott of the William Wrigley Jr. Company.³³⁸

In their study Fulmer, Gerhard and Scott tried to correct for these weaknesses when addressing the question of performance in the “100 Best Firms”. Fulmer and her colleagues used both stock market and accounting data to assess firm performance. Stock prices include the market value of a firm's future income streams from intangible assets such as positive employee relations. Indeed, the difference between a firm's book value and its market value is affected, in part, by the perceived value of its intangible assets such as employees. The “100 Best List” is a source of valuable information about employee relations in the listed firms. As a result, the stock price of a particular company on the list may be based not only on objective data from financial statements, but also on investors' subjective assessments of employee relations and other non-financial assets. Given these observations, stock returns, return on assets (ROA), and the ratio of market to book value of equity were used to measure performance. In terms of predictions, Fulmer and her colleagues felt that firms with positive employee relations should have more productive employees at all levels. This should produce higher company income, which should be reflected in a higher ROA. So if the hypothesized relationship between positive employee relations and better performance is true, then ROA should be higher for the “100 Best Firms” than for peer firms not on the list. Since high ROA has a favorable effect on market prices Fulmer and her associates predicted that the “100 Best Firms” would have a higher market to book value than peer firms. In addition, this measure is useful in assessing the value of positive employee relations since market to book value also reflects the price that the market places on intangible assets.

A key element of the study's design was that the performance of publicly traded “100 Best Companies” was compared to the performance of peer firms that were not on the list. Peer

³³⁸ Romero E. J. (2004). Are the Great Places to Work Also Great Performers? Academy of Management Executive. University of Texas. Pan American (May). pp. 150-152

firms were selected based on their similarity to the listed companies (e.g., on criteria such as size, industry, and operating income). Based on the selection criteria, fifty peer firms were chosen and then compared to fifty firms on the “100 Best List”, focusing on accounting and stock market performance. The stock performance of the fifty “100 Best Firms” was also compared with the performance of a broad market index. The financial analyses indicate that the “100 Best Companies” generally had a higher ROA than the peer comparison firms over the 6-year period studied (1995 - 2000). The “100 Best Firms” also generally had higher market-to-book ratios than their peer firms in the same period. Likewise, when examining “100 Best Firms” as a group, their six-year cumulative stock returns outperformed a composite market index (376 per cent vs. 193 per cent). Cumulative stock returns were also higher for the 100 Best than for peers, but the sample size for this comparison was fairly small, which may have affected (reduced) the statistical significance of the results. In terms of annual stock returns, the results were somewhat mixed. The “100 Best Companies” had higher annual returns compared to the composite market index for five out of six years (significantly higher in two years). Compared to their peer firms, the “100 Best Companies” had better market returns in four out of six years (significantly better in one year). Overall, Fulmer and her associates showed that positive employee relations are beneficial for companies and may be related to improved performance (as measured by both accounting and market data). In companies with positive employee relations, we can reasonably expect to find lower turnover, increased commitment, and enhanced work performance. Higher employee commitment may lead to greater employee participation in the organization. Over time, this may result in outcomes such as improved customer service and stronger relationships with customers.³³⁹

And since people want to work in a pleasant environment, firms on the “100 Best List” are able to attract superior employees. Despite the additional costs associated with providing employee-friendly practices, the benefits appear to more than compensate. Among the benefits likely to be enjoyed by the “100 Best Companies” is a workforce that, when compared to peer firms, is more creative, better at solving problems, experiences lower stress, is more closely aligned with organizational goals, and provides a talented pool of employees for higher-level positions.

In summary, the study of Fulmer and his colleagues served to remind managers that the time and money spent to create and support positive employee relations are a worthwhile

³³⁹ Romero E. J. (2004). Are the Great Places to Work Also Great Performers? Academy of Management Executive. University of Texas. Pan American (May). pp. 150-152

investment - one that will be repaid with significant returns to the firm. And since positive employee relations tend to be stable and difficult to copy, they provide a unique and sustainable competitive advantage for companies. “That said, developing positive employee relations is no easy matter and requires a long-term perspective. But in the long run, the firms that stay the course and make the investment are not likely to regret it.”³⁴⁰

3.2. Primary data analysis based on the results of the Great Place to Work[®]

Contest 2007 / 2009 in Germany

The question, which factors determine business performance and company success has been heavily disputed in business practice and management research.^{341 342} Numerous studies have been conducted in order to discover the influencing variables, especially focusing on factors like product portfolio, marketing strategy, state of technology, intensity of competition, degree of innovation, customer relationship etc.^{343 344} In this context very frequently, and in particular, employee motivation and employee satisfaction have played a preeminent role in many works, claiming that there is an obvious relationship between employee satisfaction and company value e.g.³⁴⁵ Moreover, it is presumed that employee satisfaction can be seriously handled by business management and thus also financial results and the performance of companies in general can be significantly influenced by managerial conduct.^{346 347} The main hypothesis of the underlying research paper is the statement that “the degree of employee satisfaction has an impact on the level of company value”, among other independent variables, and that this relationship can be formalized by way of a multiple cause-effect-function.

In this research, an empirical study in Germany is based on a time series investigation and – as far as this primary analysis is concerned – on real world data from official sources of the public authorities in combination with results from the Great Place to Work[®] Contest.

³⁴⁰ Romero E. J. (2004). Are the Great Places to Work Also Great Performers? Academy of Management Executive. University of Texas. Pan American (May). pp. 150-152

³⁴¹ Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E. Jr and Schlesinger, L.A. (1994), Putting the service-profit chain to work, Harvard Business Review, Vol. 72, March/ April

³⁴² Hurley, R. F. & Hooman E. (2007). Journal of Services Marketing 21/3. New York, USA: Fordham University. pp. 186–199

³⁴³ Rubera, G. and Kirca. Ahmet H. (2012). Firm Innovativeness and its Performance Outcomes: A Meta-analytic Review and Theoretical Integration. Journal of Marketing, 76(3). 130-147

³⁴⁴ Henard, D. & Szymanski, D. (2001). Why Some New Products Are More Successful Than Others, Journal of Marketing Research, 28 (August). 362–79

³⁴⁵ Smithey Fulmer, I., Gerhard, B., Scott, K.S. (2003). Are the 100 best better? An empirical investigation of the relationship between being a “great place to work” and firm performance. Personnel Psychology. p.56, pp. 965-993

³⁴⁶ Rosenstiel von, L. (2003). Motivation managen. Weinheim, Basel, Berlin: Beltz Verlag. pp. 52

³⁴⁷ Malik, F. (2006). Führen, Leisten, Leben. Frankfurt / New York: Campus Verlag. pp. 65

In a primary data analysis the author compares a sample of 30 German companies which took part in the Great Place to Work[®] Contests 2007 and/or 2009 regarding their “Equity Values” and Great Place to Work[®] Scores with a sample of 30 randomly selected German companies, which did not compete in this contest. The figures of those companies were provided in an anonymous form. The author tried to select companies, which show their financial data in the “Elektronischer Bundesanzeiger” (the “Elektronischer Bundesanzeiger” is the official statistical source of the German Government). Generally, it can be stated that after comparing the results of the Great Place to Work[®] Contest 2007 and 2009 and the financial data of the 30 GPTW companies and the other randomly selected ones, the research shows evidence of an impact of employee satisfaction on company value, among other influencing variables. With the additional primary statistical analysis the results could be further corroborated and the basic hypothesis that “the degree of employee satisfaction has an impact on the level of company value” could be substantiated.

Basic hypothesis and empirical test design

The underlying basic hypothesis of this research paper can also read as follows: “Increasing degrees of employee satisfaction - by non - changing (ceteris paribus) other impact variables - have a positive influence on the company value”.

In order to test this basic hypothesis the author is using data from public statistical resources of the German Government (“Elektronischer Bundesanzeiger”) and from GPTW contest data as mentioned before. The GPTW contest data represent the sample of firms which have achieved high scores of employee satisfaction and their respective company value data. The GPTW contest, which has been conducted a number of times in the USA, in Europe and basically all over the world, has attracted ambitious companies to participate in order to demonstrate the human resources orientation and the outstanding satisfaction of their respective employees. There is strong evidence that due to the competitive approach of the GPTW contests, mainly those companies took part whose employee satisfaction has been far about average anyway³⁴⁸, even before the tests. In addition the outcomes of the GPTW contests demonstrate high scores of employee satisfaction, in particular among the top ranked companies. Comparing employee satisfaction scores to the available data of general employee satisfaction within a representative study with companies all over Germany, it turns out that

³⁴⁸ Schulte-Deußen Dr. Karsten, Leiter Projektmanagement, Great Place to Work[®] Deutschland, Sülzburgstrasse 104-106, D-50937 Köln, T +49 221 933 35-157, E kschulte@greatplacetowork.de, www.greatplacetowork.de

the GPTW companies show indeed high employee satisfaction results.³⁴⁹ The GPTW Institute provided the list of the 100 top GPTW companies in terms of employee satisfaction. Out of those 100 companies, 30 of them could be identified as those ones, which also provide their relevant data concerning the balance sheet, the profit and loss account and the number of employees, industry section, building the basis for computing the company value in the “Elektronischen Bundesanzeiger” (the official statistical source in Germany, which collects business data of companies by law). Those GPTW companies represent high scores far above average of employee satisfaction at a very high probability level.

Given the fact that the author has data available about top score companies in terms of their employee satisfaction results and their corresponding company value data, it is now necessary to identify a sample of control companies with a basically representative data set concerning industry section, balance sheet, profit and loss account and employees numbers. Thus those identified companies from the “Elektronischer Bundesanzeiger” can be presumed to present a “normal” state of data, due to the fact that they are chosen randomly according to the guidelines of empirical randomization, in this context that a sufficient sample structure is given by randomly choosing the objects from a population, meaning that each object has an equal chance to appear in the sample. Also it is proposed that sample sizes between 30 and 500 are appropriate for most research sampling³⁵⁰. The company data from the “Elektronischer Bundesanzeiger” represent a sample of “normal” German companies with their company value data and the assumption that their (non-known) employee satisfaction data are normally distributed, which means “average” and not significantly above average as in the GPTW data set. To further clarify the empirical procedure, the following can be pointed out. The GPTW sample provides employee satisfaction scores significantly above average (as outlined above) and their relevant company value data. The control company sample provides their company value data, but no employee satisfaction data. According to the rationale outlined above, their (non-known) employee satisfaction data are presumably not above average, but with a high probability normally distributed. Thus the author can compare the company value data of the high score employee satisfaction companies with the company value data of the randomly selected ones. Also it can be assumed that the employee satisfaction scores of the first group are significantly higher than those of the control group. If it turns out that the company values of the GPTW group are also obviously higher than the ones in the control group, the author can substantiate his hypothesis that employee satisfaction has a positive impact on the

³⁴⁹ www.sueddeutsche.de [2014 March 31 – 15.07] – Janker Karin. Studie zur Mitarbeitermotivation

³⁵⁰ Cavana, R., Delahaya B., Sekarna, U. (2001). Applied business research. Wiley Verlag. ISBN 0471341266. pp. 279

company value. The companies in the control group selected randomly from the “Elektronischer Bundesanzeiger” can be considered as “normal”, because they represent a random sample of the German companies in terms of their balance sheet, profit and loss, industry section and number of employees data. The “Elektronischer Bundesanzeiger” collects those data based on a specific law and is comprised of about three million legal entities in total, of which about 2 million can be regarded as SME in terms of sales turnover (less than 50 million € p.a.) and number of employees (less than 250)³⁵¹. With a random procedure the author selected 30 of about 200 companies which are in terms of turnover, numbers of employees and industry section comparable with the Great Place to Work[®] companies.

In the following a test statistics (t-test) was conducted by comparing the high employee satisfaction sample (GPTW) and the “normal” employee satisfaction sample through their respective company value data.

In a first step the Great Place to Work[®] Scores (scores for employee satisfaction) were collected and shown in a table. Of all attending companies which took part in the contest, only the best 100 companies were awarded a GPTW Certificate.

3.2.1. Testing statistics and findings

The table 3.2. gives an overview regarding the scores of the winning 100 companies. In a next step these scores of the 100 winning companies were tested for a normal distribution with the Shapiro-Wilks-test. In statistics the Shapiro–Wilks –Test, tests the null-hypothesis that a sample x_1, \dots, x_n came from a normally distributed population. It was published in 1965 by Samuel Shapiro and Martin Wilk.³⁵²

³⁵¹

<https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/UnternehmenHanderk/KleineMittlereUnternehmenMittelstand/KleineMittlereUnternehmenMittelstand.html> [2015. March]

³⁵² Shapiro, S. S.; Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika* 52 (3-4): 591–611

Table 3.2: GPTW scores 2007/2009

Ranking	2007	2009	Ranking	2007	2009	Ranking	2007	2009	Ranking		
1	167,7000	159,3802	26	136,9726	133,1058	51	129,9689	126,5543	76	122,4809	122,1900
2	165,9158	156,5001	27	136,8622	133,0948	52	129,9239	126,4499	77	122,1122	122,1691
3	165,6865	152,7992	28	136,8015	133,0606	53	129,7001	125,9147	78	122,0237	122,0520
4	165,4519	150,4844	29	136,7547	132,8851	54	129,6455	125,6413	79	122,0037	121,5040
5	156,9183	148,5375	30	136,2657	132,8661	55	129,5626	124,9530	80	121,9711	121,4320
6	155,6737	146,2533	31	135,7511	132,7587	56	129,5527	124,7188	81	121,8718	121,3801
7	154,7599	145,6083	32	135,4797	132,3270	57	129,4242	124,5744	82	121,8325	121,2436
8	154,4174	145,0955	33	135,0566	132,0812	58	129,3788	124,5158	83	121,4456	120,8587
9	153,9680	144,0999	34	134,4954	131,6893	59	129,2386	124,3497	84	121,2304	120,8470
10	153,0743	143,3924	35	133,8596	130,7464	60	129,1922	124,2313	85	120,6079	120,8234
11	152,3473	142,1186	36	133,7448	130,6820	61	129,1856	124,2080	86	120,5964	120,7690
12	151,6374	141,0248	37	133,0731	130,4586	62	128,7736	123,9893	87	120,4532	120,1537
13	149,0078	139,8175	38	132,2588	129,8089	63	128,3255	123,8980	88	119,9720	120,1117
14	148,6163	138,8463	39	132,0573	129,5430	64	128,1069	123,8223	89	118,5327	119,9821
15	142,2294	138,8086	40	131,8519	129,2726	65	127,5961	123,7307	90	118,3160	119,5249
16	141,9546	136,6235	41	131,7905	129,1824	66	127,4314	123,6086	91	118,0534	119,2616
17	141,8847	136,0369	42	131,6872	128,9340	67	126,6146	123,2750	92	117,1819	119,2403
18	141,2745	135,8496	43	130,9181	128,8350	68	125,2100	123,1510	93	117,0602	119,2156
19	140,6114	135,2788	44	130,8932	128,5265	69	125,1796	122,8639	94	117,0429	118,8496
20	140,2446	134,7387	45	130,6491	128,3223	70	124,8543	122,8625	95	116,6962	117,2879
21	139,2039	133,8153	46	130,5001	127,8717	71	124,6674	122,7693	96	116,5018	117,2515
22	139,1543	133,5529	47	130,4242	127,2884	72	124,2030	122,7259	97	116,2558	116,9893
23	138,0127	133,5333	48	130,3963	127,2167	73	124,0407	122,7255	98	115,5914	116,9754
24	137,2345	133,3071	49	130,3155	126,8208	74	123,5607	122,7207	99	115,1543	116,9675
25	137,0377	133,2871	50	130,0869	126,7383	75	123,4121	122,6026	100	114,4915	116,9634
									Ø	132,2919	128,8781

Source: Great Place to Work[®] Institute

Shapiro-Wilks-test procedure:

The Shapiro-Wilks test calculator (online done with calculator-fx.cm)³⁵³ for normal distribution shows the following results:

Great Place to Work[®] - Totalscores_”100_Best”_2007 = 0.914124846

Great Place to Work[®] - Totalscores_”100_Best”_2009 = 0.905479848

As a result it can be maintained that – with a high probability – the data follow a normal distribution.

Testing statistics EBIT, Equity Value, Equity Value on total assets and Equity Value on sales

In a next step testing statistics for EBIT, equity value, equity value on total assets and equity value on sales, comparing GPTW companies and “randomly selected normal German companies” will be computed:

³⁵³ <http://calculator-fx.com/calculator/statistics/shapiro-test> [2013, December]

All the figures and numbers of the “randomly selected” German companies are taken from the “Elektronischer Bundesanzeiger”. The author received the names of the companies directly from the Great Place to Work[®] Institute. An issue may be that only large incorporated companies with more than 50 Mio € turnover are obliged to show their complete financial data, whereas smaller companies have lower or no legal standards for disclosure. Based on a random procedure the author chose a sample of 30 companies out of the total population, of German companies, representing the statistical minimum sample size for statistical analysis.³⁵⁴

In the following paragraphs EBIT and equity value of 30 randomly selected GPTW and “normal” German companies will be computed. There are several possibilities for computing company value. For most of these several models a lot of financial data out of balance sheets and Profit and Loss accounts as well as future planning data are necessary. Most of these data are not available in the “Elektronischer Bundesanzeiger”. The “Elektronischer Bundesanzeiger” is a major official data source, issued by the German federal government. It collects mandatory data delivered by all of the German companies which are subject to the German economic and commercial legislation. But nevertheless the data of the “Elektronischer Bundesanzeiger” represent an overall picture of EBIT as well as “Equity Value” of the whole population of German companies.

Because of the non-availability of future planning data, this dissertation will use the **EBIT-Multiple Model** which is used very often in mergers & acquisition transactions.

Out of actual multiplier data (see table 3.3) the average multiplier for the different industries were calculated.³⁵⁵ For calculating the average multiplier the multiple for Small-Caps is used because most of the randomly selected companies are in this range. The 30 randomly selected GPTW companies can be allocated to 12 different industries.

The table below shows the allocation of the 30 randomly selected GPTW companies to their respective industry and the computation of the average multiplier.

³⁵⁴ Rasch D., Verdooren L.R., Growers J.I. (1999), *Fundamentals in the Design and Analysis of Experiments and Surveys*, München, Wien

³⁵⁵ Angermann M&A International, Klein& Kollegen; www.finance-magazin.de

Table 3.3: GPTW companies - 12 different industries

The 30 randomly selected GPTW companies can be allocated to 12 different industries:		
Branch	Average Multiplier	Companies
Trade and e-commerce	6,45	2, 4, 14
Electronics	6	8, 9, 15, 21
Machinery and Plant engineering	6,1	24
Chemistry	6,95	27
Textile	5,4	23
Food	6,3	17
Environmental technology	6,8	22
Gas, power and water	6,95	1
Consulting	6,55	3
Pharmacy	7,3	5, 7, 10, 11, 12, 13, 26
Telecommunication	6,65	6
Software	6,55	16, 18, 19, 20, 28, 29, 30

Source: www.finance-magazin.de

After computing the average multiplier for each industry the equity value of the 30 randomly selected GPTW companies will be calculated with the corresponding multiplier. The detailed calculation of the EBIT`s and Equity Values is shown in the Appendix 3.

The table 3.4. shows the EBIT`s and “Equity Values” with standardization on total assets and sales of 30 randomly selected companies, which attended the Great Place to Work[®] Contest 2007 and 2009.

Table 3.4: Average EBIT and EV of 30 randomly selected GPTW companies in Germany with correction of negative EV

Company	EBIT in T€		Equity value in T€		Equity value on total Assets in %		Equity value on Sales in %	
	2006	2008	2006	2008	2006	2008	2006	2008
1	2.217	1.337	2.184	9.271	2,2	11,0	1,1	4,3
2	943	1.091	6.691	6.212	175,0	146,3	0,0	0,0
3	6.457	6.457	40.151	39.731	407,1	405,5	67,7	55,7
4	6.706	3.819	92.822	71.834	139,5	101,0	258,6	197,4
5	66.196	65.038	483.394	475.027	199,4	132,6	258,6	312,1
6	254	722	1.834	4.336	50,5	94,2	0,0	0,0
7	-99	207	0	483	0,0	19,6	0,0	3,7
8	6.589	59.299	43.503	362.244	179,3	1.382,0	75,0	551,6
9	1.664	774	10.877	5.550	187,9	103,0	62,0	36,1
10	8.212	2.508	101.670	59.949	98,2	54,0	187,0	110,6
11	-390	1.441	0	10.547	0,0	51,2	0,0	8,8
12	693	7.168	5.060	52.329	24,4	178,3	5,2	56,8
13	1.996	2.441	15.502	19.402	53,7	25,0	55,9	22,3
14	-8.205	-11.681	0	0	0,0	0,0	0,0	0,0
15	7.432	12.261	46.962	76.202	118,5	148,7	37,4	45,0
16	9.299	11.189	61.853	75.063	503,8	557,7	0,0	0,0
17	-940	-1.031	0	0	0,0	0,0	0,0	0,0
18	3.924	578	55.226	25.980	36,3	17,9	36,7	21,8
19	2.422	2.178	20.413	18.664	101,9	106,0	68,2	58,7
20	3.374	4.135	25.075	28.306	50,4	54,1	57,2	44,5
21	2.539	1.656	15.283	10.167	69,4	66,4	105,3	67,4
22	1.493	3.198	9.233	22.786	91,4	145,9	0,0	0,0
23	528	494	2.298	10.513	67,5	113,5	20,7	101,4
24	5.699	6.442	87.846	50.142	165,9	148,9	81,7	73,0
25	8.131	1.873	34.662	40.596	158,3	85,4	131,5	75,5
26	1.674	1.422	12.623	10.297	75,3	42,1	132,5	95,7
27	3.697	4.871	29.793	34.707	294,9	406,9	0,0	0,0
28	1.024	1.093	6.440	6.593	83,4	89,1	0,0	0,0
29	1.070	2.047	7.178	13.852	193,6	213,0	207,3	158,7
30	2.064	4.289	13.686	28.500	109,3	143,3	39,6	64,2
Average	4.889	6.577	41.075	52.309	121	168	63	72

Source: Elektronischer Bundesanzeiger, 2013

From this data set, a comparison can be done between these 30 out of the “100 Best companies” and the other randomly selected “normal” German companies. By regarding the absolute average EBIT and Equity Value of the 30 out of the “100 Best Companies”, differences can be pointed out, put in comparison with 30 randomly selected companies and, finally, the empirical data were subject to the “t-test”. It was tested if there is any remarkable difference regarding EBIT and company value between the “100 Best Companies” and “normal” German companies. 30 companies which were not among the “100 Best” or did not participate in the contest were selected randomly out of the “Elektronischer Bundesanzeiger”.

The testing objective is pointed out as follows:

If the average EBIT and “Equity Value” and their standardization on total assets and on sales of those Great Place to Work[®] Companies should be significantly higher than the average EBIT and “Equity Value” of the remaining “normal” German companies (represented by the randomly selected sample of 30 “normal” companies), it can be postulated that this result may

have been caused at least to a certain extent by higher employee satisfaction (null hypothesis vs. alternative hypothesis). This is the fact because the randomly selected 30 Great Place to Work[®] Companies are definitely among the best Great Place to Work[®] Scores (representing employee satisfaction) within a sample of some hundred companies participating in the Great Place to Work[®] Contest. It can be assumed that generally only those companies decided to participate in the Great Place to Work[®] Contest, which presumably show a higher level of employee satisfaction anyway (Dr. Schulte-Deußen K., 2012).³⁵⁶

Now the average EBIT and Equity Value of these 30 randomly selected “normal” German companies are computed. The 30 randomly selected “normal” German companies can be allocated to 10 different industries.

The table below shows the allocation of the 30 randomly selected “normal” German companies to their respective industry and the computation of the average multiplier.

Table 3.5: “normal” German companies - 10 different industries

The 30 randomly selected “normal” Companies can be allocated to 10 different industries:		
Branch	Average Multiplier	Companies
Media	6,8	17, 26, 29
Trade and e-commerce	6,45	1, 12, 3, 4, 5
Electronics	6	12
Machinery and Plant engineering	6,1	8, 19, 20, 21, 23, 30
Chemistry	6,95	6, 9, 10, 13, 15, 18, 24
Textile	5,4	28
Food	6,3	22, 27
Environmental technology	6,8	7
Construction and craft	4,7	11
Vehicle production and equipment	5,6	14, 16, 25

Source: www.finance-magazin.de

After computing the average multiplier for each industry the Equity value of the 30 companies will be calculated with the corresponding multiplier. The detailed calculation of the EBITs and Equity Values is shown in the Appendix 4. The 30 randomly selected companies were taken from the “Elektronischer Bundesanzeiger”. The “Elektronischer Bundesanzeiger” is a major official data source, issued by the German federal government. It collects mandatory data delivered by all of the German companies which are subject to the German economic and commercial legislation. The data of the “Elektronischer Bundesanzeiger” represent an overall picture of also EBIT and “Equity Value” of the population of German companies.

³⁵⁶ Schulte-Deußen Dr. Karsten, Leiter Projektmanagement, Great Place to Work[®] Deutschland, Sülzburgstrasse 104-106, D-50937 Köln, T +49 221 933 35-157, E kschulte@greatplacetowork.de, www.greatplacetowork.de

The table below shows the EBITs and Equity Values and the standardization on total assets and sales of the 30 randomly selected “normal” German companies representing the population of German companies.

Table 3.6: Average EBIT and EV of 30 randomly selected “normal” companies in Germany with correction of negative EV

Company	EBIT in T€		Equity value in T€		Equity value on total Assets in %		Equity value on Sales in %	
	2006	2008	2006	2008	2006	2008	2006	2008
1	508	466	0	0	0,0	0,0	0,0	0,0
2	407	520	129	0	2,8	0,0	0,0	0,0
3	303	126	1.968	661	25,5	8,6	0,0	0,0
4	858	338	4.423	15	74,7	0,2	0,0	0,0
5	195	61	0	0	0,0	0,0	0,0	0,0
6	6.046	3.310	44.628	23.322	244,1	236,1	346,6	0,0
7	-272	1.223	0	5.587	0,0	59,5	0,0	0,0
8	-396	130	0	0	0,0	0,0	0,0	0,0
9	4.928	6.611	34.992	45.974	329,1	398,6	116,2	156,5
10	-15.495	-3.016	0	0	0,0	0,0	0,0	0,0
11	511	691	3.305	4.414	81,9	86,7	34,5	0,0
12	6.965	9.917	56.074	70.180	178,2	243,8	100,2	103,4
13	623	639	5.327	5.438	26,8	24,2	40,9	40,6
14	2.415	7.930	25.208	62.146	258,5	317,4	77,0	107,7
15	3.452	2.183	24.101	15.189	46,2	30,0	34,7	26,6
16	7.902	10.066	42.353	53.810	150,1	168,7	41,1	44,0
17	737	410	1.675	0	21,1	0,0	12,5	0,0
18	4.138	3.895	25.013	28.292	146,0	206,1	73,6	74,0
19	3.803	3.694	20.289	8.784	45,3	16,0	20,9	7,3
20	885	1.145	0	0	0,0	0,0	0,0	0,0
21	3.678	6.340	27.180	43.299	59,1	86,4	42,4	56,5
22	614	450	2.729	2.433	25,4	29,0	0,0	5,9
23	2.090	1.068	18.130	12.182	82,9	49,9	0,0	0,0
24	624	639	5.334	5.438	26,9	24,2	40,9	40,6
25	1.382	1.220	8.260	5.501	63,9	47,8	0,0	0,0
26	823	1.058	1.103	5.370	6,2	31,8	0,0	0,0
27	4.434	1.851	41.510	27.391	65,8	38,9	34,8	18,0
28	791	1.306	3.704	5.901	73,5	148,6	0,0	0,0
29	293	347	0	1.099	0,0	11,8	0,0	0,0
30	1.912	2.212	11.622	11.425	308,4	242,6	94,6	67,6
Average	1.505	2.228	13.635	14.795	78	84	37	25

Source: Elektronischer Bundesanzeiger, 2013

More than half of the 30 randomly selected “normal” German companies (16) could increase their equity value during the regarded period. There are some companies, out of the randomly selected “normal” ones, as well out of the GPTW companies, which show negative equity values (Appendix 5 and Appendix 6). Theoretically that would mean that the owner of the company has to give the buyer of the company compensation to “get rid” of it. In practice or in the Mergers & Acquisition business this would never happen. Therefore, from a realistic point of view, computing the average company value should be corrected by neglecting negative Equity Values.

Testing statistics for Equity Value on total assets and on sales for “Great Place to Work®” and “normal” companies with the t-test and Shapiro-Wilks

A t-test is a statistical hypothesis test in which the test statistic follows a Student's t-distribution if the null hypothesis is supported. It is most commonly applied when the test sample values would follow a normal distribution, if the value of a scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistic (under certain conditions) follows a Student's *t* distribution.

The t-statistic was introduced in 1908 by William Sealy Gosset, a chemist working for the Guinness brewery in Dublin, Ireland ("Student" was his pen name).^{357 358 359}

Among the most frequently used t-tests are:

- A one-sample location test of whether the mean of a normally distributed population has a value specified in a null hypothesis.
- A two sample location test of the null hypothesis that the means of two normally distributed populations are equal. All such tests are usually called Student's t-tests, though strictly speaking that name should only be used if the variances of the two populations are also assumed to be equal; the form of the test used when this assumption is dropped is sometimes called Welch's t-test. These tests are often referred to as "unpaired" or "independent samples" t-tests, as they are typically applied when the statistical units underlying the two samples being compared are non-overlapping.³⁶⁰
- A test of the null hypothesis that the difference between two responses measured on the same statistical unit has a mean value of zero. For example, suppose we measure the size of a cancer patient's tumor before and after a treatment. If the treatment is effective, we expect the tumor size for many of the patients to be smaller following the treatment. This is often referred to as the "paired" or "repeated measures" t-test:^{361 362}
- A test of whether the slope of a regression line differs significantly from 0.

³⁵⁷ Mankiewicz Richard, *The Story of Mathematics*, Princeton University Press, 2004, ISBN 0691120463, 9780691120461, p. 158

³⁵⁸ O'Connor, J. J., Robertson, E. F. (2003). Student's t-test. MacTutor History of Mathematics archive. University of St Andrews. <http://www-history.mcs.st-andrews.ac.uk/Biographies/Gosset.html> [2013]

³⁵⁹ Fisher, Box, Joan (1987). Guinness, Gosset, Fisher, and Small Samples. *Statistical Science* 2 (1), pp. 45–52

³⁶⁰ Fadem, B. (2008). *High-Yield Behavioral Science (High-Yield Series)*. Hagerstown, MD: Lippincott Williams & Wilkins

³⁶¹ Fadem, B. (2008). *High-Yield Behavioral Science (High-Yield Series)*. Hagerstown, MD: Lippincott Williams & Wilkins

³⁶² Zimmerman, D. W. (1997). A Note on Interpretation of the Paired-Samples t Test. *Journal of Educational and Behavioral Statistics* 22 (3). 349–360

Furthermore, the author conducted the **t-test procedure** for unpaired samples (GPTW sample vs. randomly selected “normal” German company sample) and achieved the following results: The testing procedure was done with the online “quickcalcs” calculator, “GraphPad Software”.³⁶³ The full set of the tables and data can be found in the Appendix 7.

The equity value for the year 2006 of the GPTW companies is conspicuously higher than the equity value of the control sample companies (mean of 41075.32 for GPTW companies, vs. 13635.23 for the “normal” companies), but only at a confidence level of $p=0.1$, and not quite at the usual $p=0.05$ level.

In addition the same procedure was conducted for the data of 2008 with the following results: Again the equity value of the GPTW companies is tremendously higher than the data of the “normal” companies (mean equity value 52309.43 vs. 14648.05) at an acceptable level of statistical significance ($p=0.0548$).

Those data indicate that our hypothesis of higher equity values determined by higher employee satisfaction is plausible.

In addition, the same t-test procedures were conducted for the standardized equity values on total assets and the equity values on sales for the years 2006 and 2008.

Again, the equity values on total assets also indicate strongly that the GPTW companies perform better than the normal companies in both years of the investigation. The means of the equity value on total assets for 2006 result in 121237 vs. 78080 in favor of the GPTW companies at a not quite sufficient level of significance ($p=0.12$).

The means for 2008 represent 168078 vs. 83563 in favor of the GPTW companies at a not quite sufficient level of significance ($p=0.10$).

The corresponding test-results for equity value on sales confirm the data above. The means for 2006 result in 62973 vs. 37030 in favor of the GPTW companies, at a not quite sufficient level of significance ($p=0.17$), whereas the values for 2008 result in the means of 72177 vs. 24957 in favor the GPTW companies and also at a very acceptable significance level ($p=0.0368$).

Those results above indicate that in all cases the equity values on assets and equity value on sales of the high employment satisfaction companies are conspicuously above the values of the “normal” German companies, but with no statistical significance at the $p=0.05$ level.

³⁶³ <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

However the test procedure for the 2008 equity value on sales indeed shows a significant advantage of the high employment satisfaction companies over the “normal” German companies at a $p = 0.0368$ level. Those results are in line with our hypothesis that higher employee satisfaction leads to a higher company value.

Shapiro-Wilks-Test

In addition the Shapiro-Wilks-Test was conducted on the normal distribution of both samples data concerning the equity values on asset and the equity values on sales for 2006 and 2008 with the following results.³⁶⁴

30 randomly selected companies:

EV on total Assets 2006 - with correction of negative EV =	0.78269738
EV on total Assets 2008 - with correction of negative EV =	0.76870513
EV on Sales 2006 - with correction of negative EV =	0.571966887
EV on Sales 2008 - with correction of negative EV =	0.688834429

30 randomly selected GPTW companies:

GPTW EV on total Assets 2006 - with correction of negative EV =	0.838690937
GPTW EV on total Assets 2008 - with correction of negative EV =	0.545609713
GPTW EV on Sales 2006 - with correction of negative EV =	0.793729782
GPTW EV on Sales 2008 - with correction of negative EV =	0.632305145

The majority of the test results suggest a high probability, or at least an acceptable probability for a normal distribution (except for the equity values on sales 2006 for the “normal” German companies and equity value on total asset 2008 for the GPTW companies).

3.2.2. Summarizing correlation analysis and additional statistical findings

In statistics, correlation analysis is a statistical process for estimating the relationships among variables.

As pointed out in the first chapter, concerning the intensive practical and academic discussion about the decisive influencing factors of business performance and business success the author can also refer to the study of Bauer, Neumann and Lange with the title “Effects of employee satisfaction: An empirical study exemplified by the automotive retail industry” (Bauer H.H., Neumann M.M. & Lange M.A., 2004). The aim of the study was to identify the determining factors for and the consequences of employee satisfaction in the context of a

³⁶⁴ <http://calculator-fx.com/calculator/statistics/shapiro-test> [2013]

structural equation model, also including variables like organisational trust and company image, and their impact on company success.³⁶⁵

The theoretical framework of our basic hypothesis is further supported by a very recent study with the title “Work motivation and job satisfaction as Antecedents of Research Performance: Investigation of Different Mediation Models.” (Ringelhan et.al., 2013). This investigation develops a cause-effect model, pointing out that job satisfaction is a decisive intervening variable fostering work motivation and thus influencing organizational performance.³⁶⁶ In addition, the data of the study “support models that suggest job satisfaction as a mediator of the relationship between intrinsic work motivation and research performance”.³⁶⁷ The findings of that research study also corroborate our approach for a multiple regression function, demonstrating the impact of the independent variable “employee satisfaction” in connection with a residual of additional independent variables on the dependent variable, labelled “performance” and / or “company value” (see page 28 of the dissertation).

Taking into account that all those influencing variables, mentioned in the literature research, have an impact on company value as the dependent variable the author formulates the following model for a multiple regression function, pointing out the cause-effect-relation between the performance factors and company success:

Formula 3.1: Theoretical standard regression function

$Y = a + b x_1 + c x_2 + d x_3 + e x_4 + f x_5 + \lambda$ standard function, with the following components:

a =	regression constant
$b x_1 =$	employee satisfaction
$c x_2 =$	marketing efficiency
$d x_3 =$	product portfolio and quality, innovation and technological standards
$e x_4 =$	relationship with suppliers
$f x_5 =$	overall market and industry situation and financial authorities
$\lambda =$	residual (non-specifiable other impact factors)
Y =	company value as the dependent variable

Source: Brenninger, Neuert (2014)

³⁶⁵ Bauer, H.H., Neumann, M.M. & Lange, M.A. (2004). Effects of employee satisfaction: An empirical study exemplified by the automotive retail industry. Univ. Mannheim, Inst. für Marktorientierte Performance Unternehmensführung. pp. 5-28

³⁶⁶ Ringelhan S., Wollersheim J., Welpel I. M., Fiedler M., Spörrle M. (2013), Work motivation and job satisfaction as Antecedents of Research Performance: Investigation of Different Mediation Models. ZfB-Special Issue 3/2013, Wiesbaden: Springer Fachmedien, pp. 7

³⁶⁷ Ringelhan S., Wollersheim J., Welpel I. M., Fiedler M., Spörrle M. (2013), Work motivation and job satisfaction as Antecedents of Research Performance: Investigation of Different Mediation Models. ZfB-Special Issue 3/2013, Wiesbaden: Springer Fachmedien, p. 8

Finally the author can now develop a regression function for the cause-effect relation of employee satisfaction scores (as the independent variable) and company value (as the dependent variable) for the GPTW sample, for which the empirical data have been made available. Due to the fact that our research concentrates on the variable “employee satisfaction”, by keeping the other independent variables *ceteris paribus*, the following theoretical regression function can be formulated:

Formula 3. 2: Theoretical Regression function

$$Y = a + bx_1 + \varepsilon$$

ε = residual: other impact variables, kept *ceteris paribus*

Source: Brenninger, Neuert (2014)

For the independent variable “employee satisfaction scores” the data of the GPTW contest 2006 and 2008 were used. Since the Shapiro–Wilks test provided a normal distribution for this data set it can be assumed that employee satisfaction scores are normally distributed between the range of 167.7000 (highest employee satisfaction score) and 114.4915 (lowest employee satisfaction score). The author can then relate the employee satisfaction scores to the empirical equity values on total assets and equity values on sales.

The results of the following correlation analyses are based on the following assumptions.

- Since the GPTW contest data are provided anonymously, it is not possible to assign the equity value data of the GPTW sample to the employee scores. However, the author has empirical evidence that higher employee satisfaction scores correspond with higher equity values. In order to align the corresponding employee satisfaction scores and equity values, an empirical ranking of the provided GPTW employee satisfaction scores in declining sequence was developed and divided in three score classes 1 to 10, 11 to 20 and 21 to 30. They represent the sample size of 30 and the assumed employee satisfaction performance in the three classes high, average and low. Given the normal distribution of the sample, according to the Shapiro-Wilk test, it can be assumed that the higher equity value performance corresponds with the higher employee satisfaction, the average one with the average and the low one with the low in the three classes mentioned above. Within each class the equity values were then randomly assigned to the GPTW scores, using the SPSS randomization generator (see Appendix 8 and Appendix 9).
- The German firms which participated in the Great Place to Work[®] contest can be considered as possessing an employee satisfaction rating significantly far above the average of German companies (Dr. Schulte-Deußen K., 2012).

- An empirical study of the International Survey Research (ISR) Frankfurt among a representative sample of German companies into employee satisfaction shows that the employee satisfaction scores of German companies are on an average rated with a degree of satisfaction of 61 %, which is also about average in comparison to other participating countries like USA, France, Spain, UK, Canada, Brazil, Japan, etc. (ISR).³⁶⁸

The author conducted the respective correlation analyses between employee satisfaction and equity values on assets and sales and - in addition - between employee satisfaction scores and the ε residual values with the following results shown in table 3.7. (the full set of the tables and data can be found in the Appendix 10):

³⁶⁸ International Survey Research (ISR). <http://www.computerwoche.de/a/deutsche-unternehmer-fuehren-schlechter-als-andere,1061167> [2013, November]

Table 3.7: Correlation Analysis: x = 30 GPTW / y = EV on total assets

Statistic	Variable X	Variable Y
x = 30 GPTW / y = EV on total assets		
Mean	138.1718	168.0866667
Biased Standard Deviation	12.65986652	252.6003568
Correlation r	0.538443012	
Determination	0.289920877	
p-value (2 sided)	0.002144154	
p-value (1 sided)	0.001072077	
x = 30 GPTW / y = EV on sales		
Mean	138.1718	72.1766667
Biased Standard Deviation	12.65986652	112.1113693
Correlation r	0.661781336	
Determination	0.437954537	
p-value (2 sided)	6.82E-05	
p-value (1 sided)	3.41E-05	
x = 30 GPTW / y = ϵ - EV on total assets		
Mean	138.1718	862.0230545
Biased Standard Deviation	12.65986652	12.60204952
Correlation r	-0.972865194	
Determination	0.946466685	
p-value (2 sided)	2.43E-19	
p-value (1 sided)	1.22E-19	
x = 30 GPTW / y = ϵ - EV on sales		
Mean	138.1718	862.0230545
Biased Standard Deviation	12.65986652	12.60204952
Correlation r	-0.975083428	
Determination	0.950787691	
p-value (2 sided)	7.48E-20	
p-value (1 sided)	3.74E-20	
x = ϵ / y = EV on total assets		
Mean	862.0230545	168.0866667
Biased Standard Deviation	12.60204952	257.6003568
Correlation r	-0.659245025	
Determination	0.434604003	
p-value (2 sided)	7.43E-05	
p-value (1 sided)	3.72E-05	
x = ϵ / y = EV on sales		
Mean	862.0230545	72.17666667
Biased Standard Deviation	12.60204952	112.1113693
Correlation r	-0.633369597	
Determination	0.401157046	
p-value (2 sided)	0.000172056	
p-value (1 sided)	8.60E-05	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

The correlation analysis between the GPTW scores and the equity values on total asset delivers a correlation coefficient of $r = 0.538\dots$ and the coefficient of determination $r^2 = 0.2899\dots$ at a very high significance level of $p = 0.002$. This means a positive impact of employee satisfaction scores on the equity value on total assets.

In addition the correlation analysis between the GPTW scores and the equity values on sales shows an even higher coefficient $r = 0.661\dots$ and the coefficient of determination $r^2 = 0.437\dots$

At a very high level of significance $p = 0.0000682$. This means a positive impact of employee satisfaction scores on the equity value on sales.

The correlation analysis between the GPTW employee satisfaction scores and the impact of the residual values, represented by ϵ on the equity value on total assets shows a correlation coefficient $r = -0.972\dots$ and the coefficient of determination $r^2 = 0.946\dots$ in a negative way (in line with the hypothesis), and highly significant ($p = 0.000\dots$). This means a positive impact of employee satisfaction scores and the residual variable ϵ on the equity value on total assets.

The correlation coefficient of the GPTW employee satisfaction scores and the ϵ residuals on sales show a correlation coefficient $r = -0.975\dots$ and the coefficient of determination $r^2 = 0.950\dots$ in a negative way, and highly significant ($p = 0.000\dots$). This means a positive impact of employee satisfaction scores and the residual variable ϵ on the equity value on sales.

In addition a correlation analysis was conducted between the ϵ -residual values and their impact on the equity value on total assets and the equity values on sales. The correlation coefficient $r = -0.659$ with $r^2 = 0.434$ resp. $r = -0.633$ and $r^2 = 0.401$ both on a very high significance level $p = 0.000\dots$

The results above can be summarized as follows:

The statistical procedures demonstrate strong resp. obvious positive relations between employee satisfaction and equity on assets and equity on sales.

The respective coefficients of determination suggest that the impact of employee satisfaction on the company values represents a remarkable weight, in line with our hypothesis.

Also the correlation analysis between the two independent variables employee satisfaction and the residual ϵ shows a very strong linkage, which suggests that both dominate the variance of the dependent variable "equity value."

Additionally in order to finally provide a multiple regression function between company value as the dependent variable and employee satisfaction and ϵ - residuals as the two independent variables, the author conducted the correlation analyses between the employee satisfaction scores and the ϵ - values, and the ϵ - values and the equity values on assets and on sales with the following results:

There is a strong relationship between the ϵ - residual variable and the company values as well, on a high significance level, accompanied by remarkable coefficients of determination,

indicating that the ε - residual variables also have a strong impact on company values, again in line with our hypothesis.

In order to combine the impact of both independent variables (employee satisfaction and residual variable ε), a **final multiple regression analysis** was conducted and led to the following results:

Table 3.8: Final multiple regression analysis $X_1= 30$ GPTW / $X_2 = \varepsilon$ / $Y = EV$ on total assets

	X_1	X_2	Y
X_1	1.0	-0.97	0.54
X_2	-0.97	1.0	-0.66
Y	0.54	-0.66	1.0

Reset	Calculate
-------	-----------

	X_1	X_2
B = Standardized Regression Weight	-1.6954	-2.3046
B x r_{xy}	-0.9155	1.521

$R^2 = 0.6055$

Source: Brenninger, Neuert (2014), online done by VassarStats

R^2 = total proportion of Y variance accounted for by the combination of x_1 and x_2 .

The statistical analysis shows standardized regression weights between the employee satisfaction variable (X_1) and the ε - residual variable (X_2), indicating an impact weight surplus of the ε - residual variable of nearly 40 % in comparison to the impact weight of the employee satisfaction variable on the company value.

The multiple coefficient of determination $R^2 = 0.6055$ indicates that employee satisfaction and the ε - residual variable can explain about 61 % of the variations of the company values, which is also in line with our basic hypothesis.

3.3. Intermediate conclusions and recommendations out of the empirical investigation

The primary empirical and statistical analyses have produced various substantive findings which can be pointed out as follows:

- There is a strong impact of employee satisfaction on the equity value in a positive way. The GPTW companies (high employee satisfaction scores) show that their overall employee satisfaction is higher than the average employee satisfaction within the population of “normal” (randomly selected) German companies.
- Even though the conducted t-test procedures for equity value and their standardization on assets and sales deliver mixed results, there are some indications that the average equity value of the 30 regarded Great Place to Work[®] Companies may be significantly higher than

the equity value of the other 30 randomly selected companies (representing the “population” of German Companies).

- The correlation analysis between the dependent variables equity value on asset and equity value on sales and the employee satisfaction scores as the independent variable showed a remarkable statistical dependency, also mostly in significant or highly significant way. The correlation analyses corroborated those findings that employee satisfaction has an obvious impact on the company value.
- Finally, those results have also been confirmed by an additional multiple regression analysis including employee satisfaction and a complex of residual factors as independent variables.
- Since it can be presumed that the level of employee satisfaction within the Great Place to Work[®] Companies is generally higher than the level of employee satisfaction of the representative other 30 randomly selected companies the author may – cum grano salis – postulate: “Increasing employee satisfaction has a positive impact on the equity value”! Eventually, the author may have to consider that the empirical data set is restricted in terms of volume and sample size, which may limit the research statements and would advisably require more research based on a more voluminous data set and sample size. But nevertheless the sample size represents the statistical minimum sample size for statistical analysis³⁶⁹.

The theoretical research, the secondary data analysis from the USA and the primary data analysis from Germany confirm our basic hypothesis that “The Degree of Employee Satisfaction has an Impact on the Level of Company Value”. Based on this research it is recommended for managers to improve their employee satisfaction concepts, also in order to achieve increased financial results and higher equity values.^{370 371}

³⁶⁹ Rasch, D., Verdooren, L.R., Growers, J.I. (1999), *Fundamentals in the Design and Analysis of Experiments and Surveys*, München, Wien

³⁷⁰ Brenninger, H.-J. (May 2013). *Company Value and Employee Satisfaction: Primary Data Analysis for Testing the Basic Hypothesis. Employee Satisfaction has an Impact on the Level of Company Value*. Riga: University of Latvia. pp. 96-105

³⁷¹ Brenninger H.-J. & Neuert J. (2014 February). *Business Performance Factors, Elements of Employee Satisfaction and Company Value - Theoretical Considerations and Empirical Evidence*. The Business Review Cambridge. Library of Congress Washington, USA. The publication of the paper is in progress

4. VALIDATING EMPIRICAL CASE INVESTIGATION FOR ADDITIONAL REVIEW OF RESEARCH FINDINGS

Additional to the primary empirical investigation the author conducted a complementary research case study for which only small sample size data were available, trying to foster previous findings, and – potentially - getting additional support for the basic hypothesis. The representativeness and sample validity of small sample sizes is often discussed and in some studies substantiated.

In their study „Strategies for assuring representativeness and sample validity by small sample sizes” Gerald Prein, Susann Kluge and Udo Kelle analyzed possibilities for working with small sample sizes.³⁷² “Many small-scale experiments with local control and choice of measures are in many ways preferable to giant national experiments with a promised standardization that is neither feasible nor even desirable from the standpoint of making irrelevancies heterogeneous.”³⁷³ “Deliberate purposive sampling for heterogeneity is usually more feasible than random sampling for representativeness.”³⁷⁴ The relevant criterion for the evaluation of the validity of a sample in empirical social research is, if the selection is a random selection or not.³⁷⁵ There exists no representativeness for its own, because a sample only can be representative in terms of criteria or combinations of criteria.³⁷⁶

The author does not claim that this case investigation will provide representative findings due to the small sample size. However, it can deliver indications whether they are “in line” with the secondary and primary analysis in chapter three. If this is the case, it would mean a further substantiation of our findings. If not, it would give hints that additional elaborate research would have to be conducted. Again, the main purpose of chapter four is an additional – not representative - “double check” of the previous findings. It also supports the efforts of a multi method research approach.

As stated in our previous chapters, based on an employee survey and a culture audit, attending companies were ranked from 1 to 100. In this chapter the results from eleven randomly selected companies which attended the contest 2007 and 2009 or only in 2009 were

³⁷² Prein, G., Kluge, S., Kelle, U. (1994). University of Bremen working paper No 18, 2nd edition

³⁷³ Cook, T. D.; Campbell, D. T. (1979): Quasi-Experimentation. Design & Analysis Issues for Field Settings. Boston: Houghton Mifflin Company. p. 80

³⁷⁴ Cook, T. D.; Campbell, D. T. (1979): Quasi-Experimentation. Design & Analysis Issues for Field Settings. Boston: Houghton Mifflin Company. p. 77

³⁷⁵ Schnell, R., Hill, P. B. & Esser, E. (1989). Methoden der empirischen Sozialforschung, 2. Überarb. und erwit. Aufl, München / Wien: Oldenburg. p. 281

³⁷⁶ Kriz, J., Lisch, R. (1988). Methodenlexikon für Mediziner, Psychologen, Soziologen. München; Weinheim: Psychologie Verlags Union. p. 220

compared. The companies were selected from the Great Place to Work[®] Institute and provided in an anonymous design. Though there is no possibility to get inference about industry, market or company name. These eleven companies employ more than 1000 employees and have in sum a turnover about some 100 Mio €.

4.1. Operationalization of employee satisfaction

Appendix 11 shows the individual results of each company attending the Great Place to Work[®] Contest in the years 2007 and / or 2009. The arrows show a declining or rising of the score of each question individually of each company. At the bottom of the figure the total scores after specific correction of the Great Place to Work[®] Institute are conducted.

Now each company is regarded individually and differences belonging place, ranking and scores of 2007 and 2009 are compared. In the following analyses the most important results are shown and built the base for further steps. The conducted detailed data analysis is shown in the Appendix 12.

Table 4.1: Overview of attending 11 companies with average score

Company	Result	Score 2007	Score 2009
1	Company 1 took part in both years 2007 and 2009. Based on the total score, this company had a small decline from 135.48 to 130.68 points. Out of these 11 companies, company 1 reached the 7 th place in 2009.	135,48	130,68
2	Company 2 also took part both times in the contest and raised its total score from 133.07 to 152.80 from 2007 till 2009. Out of these 11 companies, company 2 reached the 2 nd place in 2009.	133,07	152,80
3	Company 3 only took part in 2009 and reached 8 th place with 129.27 points.	-	129,27
4	Company 4 took part in both years 2007 and 2009. Based on the total score this company had a small decline from 165.92 to 159.38 points. In both years 2007 and 2009 this company was on the first place out of the selected one.	165,92	159,38
5	Company 5 also took part both times in the contest and raised its total score from 130.65 up to 150.48 from 2007 till 2009. Out of these 11 companies company 5 reached the 3 rd place in 2009.	130,65	150,48
6	Company 6 took part in both years 2007 and 2009. Based on the total score this company had a decline from 152.35 to 132.08 points. Out of these 11 companies company 6 reached the 6 th place in 2009.	152,35	132,08
7	Company 7 also took part both times in the contest and raised its total score from 112.11 up to 152.80 from 2007 till 2009. Out of these 11 companies company 7 reached the 11 th place in 2009.	112,11	152,80
8	Company 8 only took part in 2009 and reached the 5 th place with 134.74 points.	-	134,74
9	Company 9 only took part in 2009 and reached the 4 th place with 138.81 points.	-	138,81
10	Company 10 only took part in 2009 and reached the 10 th place with 122.17 points.	-	122,17
11	Company 11 only took part in 2009 and reached the 9 th place with 126.74 points.	-	126,74
	Average Score	138,26	139,09

Source: Great Place to Work[®] Institute

The table above gives an overview regarding the scores of the attending eleven companies with the average score. This data set will build the base for further investigations in the following chapters.

Results and summary and remarkable findings of comparing the results of the Great Place to Work[®] Companies

After the analysis one by one of these eleven companies attending the Great Place to Work[®] Contest the most interesting findings can be pointed out:

- All these eleven companies have a very high employee satisfaction.
- The six companies which took part two times in this contest and reached a place under the “100 Best” are outstanding regarding their employee satisfaction.
- The average score 2009 is higher than the average score 2007, meaning that these eleven outstanding companies could raise their average score regarding the respective period.

4.2. Operationalization of equity value

In the next paragraphs the variation of the different equity values of these selected GPTW companies will be computed:

All the figures and numbers of the companies are out of the “Elektronischer Bundesanzeiger”. The author received the data directly from the Great Place to Work[®] Institute in an unattributed form. Because of confidentiality GPTW eliminated the names of the companies. Also an issue may be that only eight of the investigated companies showed their complete financial data in the “Elektronischer Bundesanzeiger”. Only large incorporated companies with more than 50 Mio € turnover are obliged to show their complete financial data, smaller companies have lower or no standards for disclosure. The companies which show not all necessary data should be regarded separately. The detailed computation of these results is shown in the Appendix 13.

For **company 1** all data from the year 2005 till 2008 are available. Company 1 rose its equity value from 2005 to 2008 from 6.460 T€ to 15.507 T€ which means a growth rate of nearly 140 %. Only in the year 2007 they had a small downturn which was completely compensated in the year 2008. This company is a very strong company with no bank debts and nearly 3Mio € cash.

For **company 2** there are no Profit and Loss account data in the “Elektronischer Bundesanzeiger” available. This may be caused by lower standards for publication for this company.

Also for **company 3** very spare data is available; they publicized only the P&L data for the year 2007. These data look quite well. With an EBIT of 615 T€ nearly no bank debts and 1.651 T€ cash the company is quite stable. In the year 2007 the equity value can be computed to 5.249 T€.

Company 4 has publicized the data for the years 2006 till 2008. The data show an EBIT roundabout of 1.000,--T €, the cash position decreased from 1.350 T€ to 615 T€ in 2008, though the equity value decreased from 7.395 T€ to 7.080 T€. This company has no bank debts, a solid cash position and a quite high EBIT.

Company 5 grew very well during the regarded period. The EBIT increased from 624 T€ to 1.091 T€ and therefore the company value emerged from 4.390 T€ to 6.438 T€. Only in the year 2007 a strong EBIT decline from 943 T€ to 362 T€ had to be managed. This also may be the cause for the lowering of the cash-position from 906 T€ to 3 T€ in 2008.

For **company 6** the complete data are available, too. The highest EBIT and therefore also company value was in 2005. The EBIT went down from 2005 from 2.594 T€ till 2007 to 1.324 T€ and then rose again in 2008 up to 2.178 T€. Only in 2007 was a weak decrease down to 15.494 T€ in equity value. But in 2008 equity value grew up again to 17.036 T€. Over the regarded time this company also is quite strong with a high cash position and very low debt.

Company 7 provided a relatively numerous data set. Based on this the equity value could also be calculated with the Discounted Cash Flow method. In this time EBIT rose from 14.470 T€ in 2005 up to 15.611 T€ in 2008. During this period the company was characterized by a continuous growth each year. Parallel to this raise the company paid back a shareholder credit of about 14.000 T€. This strong self-financed company with a solid cash position enhanced its equity value from 74.741 T€ to 92.896 T€ from 2005 till 2008.

The **company 8** showed a very interesting progress during the regarded period. In 2005 it started with an EBIT of 7.719 T€ and nearly doubled this up to 14.242 T€ till 2008. In 2007 the company suffered from a strong decrease from 7.926 T€ in 2006 down to 5.128 T€. The company has quite high bank debts and a short cash-position. Nevertheless the equity value exploded from 24.315 T€ up to 71.204 T€ in this period.

Company 9 showed a constant continuous approach. EBIT grew from 2.680 T€ to 3.944 T€ and the equity value from 18.728 T€ in 2005 up to 25.262 T€ in 2008. Company 9 has a strong cash-position and nearly no debts.

The **company 10** had its best year in 2005 with an EBIT of 3.390 T€ and a company value of 34.171 T€. Then EBIT slightly declined till 2007 down to 1.798 T€. In the last year of the

regarded period EBIT grew up again to 2.415 T€ and the equity value rose up to 29.103 T€. Company 10 is a very solid company with a strong cash-position.

For **company 11** is no P&L data in the “Elektronischer Bundesanzeiger” available.

After computing EBIT and Equity Value for these Companies attending the Great Place to Work[®] Contest some very interesting findings can be pointed out and build the base for some following reflections.

The table below shows the absolute figures in terms of EBIT and “Equity Value” regarding the selected companies which attended the Great Place to Work[®] Contest.

Table 4.2: Computing average EBIT and average EV of the 8 GPTW companies

Company	EBIT		Equity Value	
	2006	2008	2006	2008
1	1.436	2.140	11.091	15.507
2	-	-	-	-
3	-	-	-	-
4	1.024	1.091	7.395	7.080
5	943	1.091	6.173	6.438
6	2.422	2.178	18.615	17.036
7	14.801	15.611	79.512	92.896
8	7.926	14.242	33.079	71.204
9	3.374	3.944	22.848	25.262
10	1.866	2.415	24.199	29.103
11	-	-	-	-
Average	3.072	3.883	18.447	24.048

Source: Elektronischer Bundesanzeiger

Findings out of computing company value:

- All of the randomly selected companies show quite strong financial results.
- Only one company shows significant bank debts.
- Seven of eight companies could raise their EBIT during the regarded period.
- Six out of eight companies could raise their equity value, too.
- Both average EBIT (26,4%) and equity value (30,45%) grew during the regarded period.

Validating empirical case study findings

All of the randomly selected companies show quite strong financial results. Six companies raised their equity value during the regarded period. Only one company shows significant bank debts. From the six companies which attended the contest both times, five companies show their financial data in the “Elektronischer Bundesanzeiger”. Three from these five companies were able to raise their equity value during the regarded period despite

the fact that during 2007 - 2009 we had strong financial crisis all over the world. Most studies analyzing the relation between employee satisfaction and financial results showed evidence about this relationship.³⁷⁷

This validating case study also shows clear evidence about the relationship between employee satisfaction and equity value.³⁷⁸

4.3. Validating statistical correlation analysis and testing statistics for equity value and employee satisfaction

To test if there is any relationship between the raising and declining of equity value and the Great Place to Work[®] Score a correlation analysis can be done. In this correlation analysis the Δ equity value is set in correlation with the Δ Great Place to Work[®] Score.

A correlation analysis has been conducted on the basis of available data. If raising or declining equity values as the dependent variable are in line with rising or declining of the Great Place to Work[®] Scores (independent variable), representing employee satisfaction, our basic hypotheses would be additionally substantiated in this case, too.

The table below shows the change in company value and employee satisfaction, while comparing the results of the years 2007 and 2009.

Table 4.3: Δ EV and Δ Great Place to Work[®] Score

Company	Δ Equity value	Δ Great value to work score
1	+ 4.416	- 4,8
4	- 315	- 6,54
5	+ 265	+ 19,83
6	- 1.579	- 20,27
7	+ 13.384	+ 40,69

Source: Great Place to Work[®], Elektronischer Bundesanzeiger

Five out of the eleven companies participated in both years and also show their figures in the "Elektronischer Bundesanzeiger". Therefore only for these companies a validating correlation analysis can be done. Before starting with the SPSS Calculation some theoretical frame work about statistics has to be done. In this analysis the author will compute three different correlation coefficients which will be explained in the following chapters.

³⁷⁷ Brenninger, H.-J. (2013 May). Company Value and Employee Satisfaction: Primary Data Analysis for Testing the Basic Hypothesis. Employee Satisfaction Has an Impact on the Level of Company Value. Riga: University of Latvia. pp.96-105

³⁷⁸ Brenninger, H.-J. (2012 May). Company Value and Employee Satisfaction: Exemplary case study findings. New Challenges of Economic and Business Development. Riga: University of Latvia. pp.62-77

Pearson correlation coefficient and findings

Based on the primary data from the years 2007 and 2009, while comparing the change in equity value and Great Place to Work score[®], a SPSS calculation has been done in the first place for the Pearson-correlation. The theoretical frame work about the Pearson-correlation is done in the third chapter.

Table 4.4: Pearson correlation done by SPSS

Correlations		ΔEV	ΔGPTW
ΔEV	Correlation - Pearson	1	,792
	Significance (1-side)		,055
	N	5	5
ΔGPTW	Correlation - Pearson	,792	1
	Significance (1-side)	,055	
	N	5	5

Source: Great Place to Work[®], Elektronischer Bundesanzeiger

The analysis based on the Pearson correlation Coefficient show the following findings:

- The correlation analysis shows significant correlation at a high significance level of $p = 0,055$ representing $1 - p = 0,945$ expected probability.
- The analysis shows a strong positive correlation of 0.792
- The coefficient of determination r^2 shows the relative impact of the independent variable on the variation on the dependent variable.
- In our case $r^2 = 0,792^2 = 0,627$ meaning that varying levels of company value are nearly to an impact of 63% “caused” by the independent variable employee satisfaction, measured by the Great Place to Work[®] Score.
- Conclusion: There is a positive relationship between the variations of company value in dependence of varying employee satisfaction.

Kendall Tau and Spearman's rank correlation coefficient and findings

The following nonparametric correlation coefficients have been developed to be more robust than the Pearson correlation – especially to nonlinear relationships. In order to further test the relationship between our “Equity Value” data and Great Place to Work[®] Scores the author also conducted the correlation analysis based on “Kendall Tau” and “Spearman`s Rho” correlation coefficients.

Kendall tau rank correlation coefficient

The Kendall rank correlation coefficient, commonly referred to as Kendall's tau (τ) coefficient, is used to measure the association between two measured quantities. A tau test is a non-parametric hypothesis test for statistical dependence based on the tau coefficient. Specifically, it is a measure of rank correlation, i.e., the similarity of the orderings of the data when ranked by each of the quantities. It is named after Maurice Kendall, who developed it in 1938.³⁷⁹ Gustav Fechner had proposed a similar measure in 1897.³⁸⁰ The Kendall τ coefficient is defined as³⁸¹:

Formula 4.1: Kendall τ coefficient

$$\tau = \frac{(\text{number of concordant pairs}) - (\text{number of discordant pairs})}{\frac{1}{2} n (n - 1)}$$

Source: Nelsen, R.B. (2001)

$(x_1, y_1), (x_2, y_2), \dots, (x_n, y_n)$ is a set of observations of the joint random variables X and Y respectively, such that all the values of (x_i) and (y_i) are unique. Any pair of observations (x_i, y_i) and (x_j, y_j) are said to be concordant if the ranks for both elements agree: that is, if both $x_i > x_j$ and $y_i > y_j$ or if both $x_i < x_j$ and $y_i < y_j$. They are said to be discordant, if $x_i > x_j$ and $y_i < y_j$ or if $x_i < x_j$ and $y_i > y_j$. If $x_i = x_j$ or $y_i = y_j$, the pair is neither concordant nor discordant. The denominator is the total number pair combinations, so the coefficient must be in the range $-1 \leq \tau \leq 1$.

- If the agreement between the two rankings is perfect (i.e., the two rankings are the same) the coefficient has value 1.
- If the disagreement between the two rankings is perfect (i.e., one ranking is the reverse of the other) the coefficient has value -1 .
- If X and Y are independent, then we would expect the coefficient to be approximately zero.

The Kendall rank coefficient is often used as a test statistic in a statistical hypothesis test to establish whether two variables may be regarded as statistically dependent. This test is non-parametric, as it does not rely on any assumptions on the distributions of X or Y or the distribution of (X, Y) . Under the null hypothesis of independence of X and Y , the sampling

³⁷⁹ Kendall, M. (1938). A New Measure of Rank Correlation. *Biometrika* 30 (1–2). pp. 81–89

³⁸⁰ Kruskal, W.H. (1958). Ordinal Measures of Association. *Journal of the American Statistical Association* 53 (284). pp. 814–861

³⁸¹ Nelsen, R.B. (2001). Kendall tau metric. In Hazewinkel, Michiel. *Encyclopedia of Mathematics*. Springer. <http://www.encyclopediaofmath.org/index.php?title=K/k130020>

distribution of τ has an expected value of zero. The precise distribution cannot be characterized in terms of common distributions, but may be calculated exactly for small samples; for larger samples, it is common to use an approximation to the normal distribution, with mean zero and a variance.

Spearman's rank correlation coefficient

Spearman's rank correlation coefficient or Spearman's rho, is named after Charles Spearman and often denoted by the Greek letter ρ (rho) or as r_s . Spearman-Rho is also a non-parametric measure of statistical dependence between two variables. It assesses how well the relationship between two variables can be described using a monotonic function. If there are no repeated data values, a perfect Spearman correlation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other. Spearman's coefficient can be used when both dependent (outcome; response) variable and independent (predictor) variable are ordinal numeric, or when one variable is an ordinal numeric and the other is a continuous variable. However, it can also be appropriate to use Spearman's correlation when both variables are continuous.³⁸² The Spearman correlation coefficient is defined as the Pearson correlation coefficient between the ranked variables.³⁸³ For a sample of size n , the n X_i , Y_i are converted to ranks X_i , Y_i , and ρ is computed from these:

Formula 4.2: Spearman correlation coefficient

$$\rho = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2 (y_i - \bar{y})^2}}$$

Source: Myers, Jerome L.; Well, Arnold D. (2003)

Identical values (rank ties or value duplicates) are assigned a rank equal to the average of their positions in the ascending order of the values. In applications where duplicate values (ties) are known to be absent, a simpler procedure can be used to calculate ρ .^{384 385} Differences $d_i = x_i - y_i$ between the ranks of each observation on the two variables are calculated, and ρ is given by:

³⁸² Lehman, A., O'Rourke N., Hatcher, L. & Stepanski E.J. (2005). *Jmp for Basic Univariate and Multivariate Statistics: A Step-by-step Guide*. SAS Institute; 1 edition. p.123

³⁸³ Myers, J. L., Well, A. D. (2003). *Research Design and Statistical Analysis* (2nd ed.). Lawrence Erlbaum, pp. 508

³⁸⁴ Myers, J. L., Well, A. D. (2003). *Research Design and Statistical Analysis* (2nd ed.). Lawrence Erlbaum, pp. 508

³⁸⁵ Maritz, J.S. (1981). *Distribution-Free Statistical Methods*, Chapman & Hall. p. 217

Formula 4.3: Spearman correlation coefficient

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Source: Myers, Jerome L.; Well, Arnold D. (2003), Maritz. J.S. (1981)

There are several other numerical measures that quantify the extent of statistical dependence between pairs of observations. But in the following statistical calculations the author will focus on “Kendall-Tau” and “Spearman’s Rho”. The table below shows very interesting results.

Table 4.5: Kendall-Tau and Spearman-Rho correlation coefficient done by SPSS Nonparametric-Correlations

			ΔEV	ΔGPTW
Kendall-Tau-b	ΔEV	Correlation coefficient	1,000	,800*
		Sig. (1-side)	.	,025
		N	5	5
	ΔGPTW	Correlation coefficient	,800*	1,000
		Sig. (1-side)	,025	.
		N	5	5
Spearman-Rho	ΔEV	Correlation coefficient	1,000	,900*
		Sig. (1-side)	.	,019
		N	5	5
	ΔGPTW	Correlation coefficient	,900*	1,000
		Sig. (1-side)	,019	.
		N	5	5

Source: Myers, Jerome L.; Well, Arnold D. (2003), Maritz. J.S. (1981)

Both “Kendall Tau” and “Spearman’s Rho” show a very strong relationship between the “Equity Value” as the dependent variable and the Great Place to Work® Score as the independent variable, representing employee satisfaction (0,8 “Kendall’s Tau” and 0,9 “Spearman’s Rho”). Interestingly, both significance levels are very high (0,025 and 0,019), which further confirms the basic hypotheses. However, the author have to concede that the available data only allowed for a very small sample, which may limit our findings. Nevertheless, also the validating primary analysis is in line with the conjecture that equity value maybe significantly influenced by employee satisfaction.

Additionally the computed data are shown graphically in a diagram. The correlation analysis diagram generated by SPSS also shows, caused by the small sample size, a tendency of correlation.

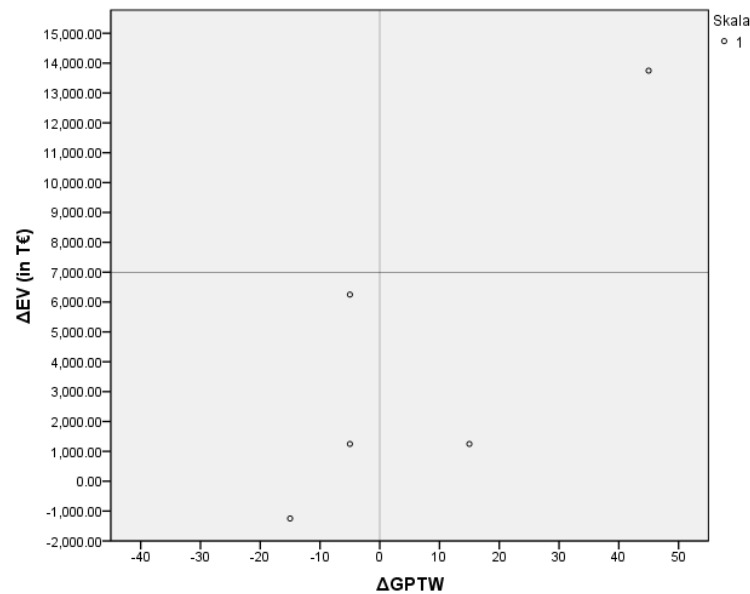


Figure 4.1: Exemplary Correlation analysis diagram done by SPSS

Source: Great Place to Work[®], Elektronischer Bundesanzeiger

The analysis based on the Correlation Analysis Diagram show the following results:

- The points are nearly in one line.
- The correlation analysis shows significant correlation.
- Conclusion: There is an exemplary correlation between raise or decline of company value and the change in employee satisfaction.

Validating case testing statistics of average EBIT and average EV comparing GPTW companies and randomly selected “normal” German companies

In this chapter the average EBIT and Equity values of the eleven analysed companies which attended the Great Place to Work[®] Contest in 2007 or 2009 are computed. As mentioned before the Great Place to Work[®] Institute tried to find some companies which attended the Great Place to Work[®] Contest in 2007 and 2009 and also show the relevant data in the “Elektronischer Bundesanzeiger”. Only eight of the eleven companies which attended the contest in 2007 and 2009 showed sufficient data for the analyses of EBIT and “Equity Value”. The data were given to the author in an anonymous form because of data security. Out of this data set, a comparison can be done between these eight out of “100 Best Companies” and other the other randomly selected 30 “normal” German companies. By regarding the absolute average EBIT and Equity Value of the eight out of “100 Best Companies” some differences can be pointed out and at the end these hypotheses can be tested with a “t-test” or a “Mann-Whitney Test”.

The table below show the absolute figures in terms of EBIT and “Equity Value”.

Table 4.6: Computing average EBIT and average EV of the 8 GPTW companies

Company	EBIT		Equity Value	
	2006	2008	2006	2008
1	1.436	2.140	11.091	15.507
2	-	-	-	-
3	-	-	-	-
4	1.024	1.091	7.395	7.080
5	943	1.091	6.173	6.438
6	2.422	2.178	18.615	17.036
7	14.801	15.611	79.512	92.896
8	7.926	14.242	33.079	71.204
9	3.374	3.944	22.848	25.262
10	1.866	2.415	24.199	29.103
11	-	-	-	-
Average	3.072	3.883	18.447	24.048

Source: Great Place to Work[®], Elektronischer Bundesanzeiger

Some findings can be stated:

- ➔ Seven of eight Companies could raise their EBIT during the regarded period.
- ➔ Six out of eight companies could raise their equity value, as well.
- ➔ Both average EBIT (26,4%) and Equity Value (30,45%) grew during the regarded period.

Analysis of Average EBIT and Equity Value of 30 randomly selected “normal” German companies and findings

To test if there is any remarkable difference regarding EBIT and company value between these randomly selected GPTW and the 30 randomly selected “normal” German companies an additional test can be done. The 30 companies which were not under the “100 Best” or don’t participate in the contest were selected randomly out of the “Elektronischer Bundesanzeiger” as mentioned in chapter three. The author`s intention is the following:

If the average EBIT and “Equity Value” of the eight Great Place to Work[®] Companies should be significantly higher than the average EBIT and “Equity Value” of the remaining “normal” German companies (represented by the randomly selected sample of 30 companies), the author can postulate that this result may have been caused at least to a certain extend by higher employee satisfaction. This is the fact because the selected eleven Great Place to Work[®] Companies are definitely among the best Great Place to Work[®] Scores (representing employee satisfaction) within a sample of some hundred companies participating in the Great Place to Work[®] Contest. It can be assumed that generally only these companies decided to

participate in the Great Place to Work[®] Contest which presumably show a higher level of employee satisfaction anyway.³⁸⁶ The average EBIT and equity value of these 30 randomly selected companies is already computed.

Table 4.7: Average EBIT and EV of 30 randomly selected “normal” German companies

Company	EBIT in T€		Equity Value in T€	
	2006	2008	2006	2008
1	508	466	-16	-1.676
2	407	520	129	-1.398
3	303	126	1.968	661
4	858	338	4.423	15
5	195	61	-2.154	-4.073
6	6.046	3.310	44.628	23.322
7	-272	1.223	-3.618	5.587
8	-396	130	-2.346	-222
9	4.928	6.611	34.992	45.974
10	-15.495	-3.016	-107.686	-16.435
11	511	691	3.305	4.414
12	6.965	9.917	56.074	70.180
13	623	639	5.327	5.438
14	2.415	7.930	25.208	62.146
15	3.452	2.183	24.101	15.189
16	7.902	10.066	42.353	53.810
17	737	410	1.675	-2.170
18	4.138	3.895	25.013	28.292
19	3.803	3.694	20.289	8.784
20	885	1.145	-1.698	-1.017
21	3.678	6.340	27.180	43.299
22	614	450	2.729	2.433
23	2.090	1.068	18.130	12.182
24	624	639	5.334	5.438
25	1.382	1.220	8.260	5.501
26	823	1.058	1.103	5.370
27	4.434	1.851	41.510	27.391
28	791	1.306	3.704	5.901
29	293	347	-617	1.099
30	1.912	2.212	11.622	11.425
	1.505	2.228	9.697	13.895

Source: Elektronischer Bundesanzeiger

Result: More than a half (16) out of the 30 randomly selected companies could raise their equity value during the regarded period. There are some companies out of the randomly selected ones, which show negative equity values. Theoretically that would mean that the owner of the company has to give the buyer of the company some money to get rid of it. In practice or in the mergers & Acquisition business this would never happen. Therefore, for a

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realistic point of view computing average company value should be corrected while neglecting negative equity values.

Table 4.8: Average EBIT and EV of 30 randomly selected “normal” German companies with correction of negative EV

Company	EBIT in T€		Equity Value in T€	
	2006	2008	2006	2008
1	508	466	0	0
2	407	520	129	0
3	303	126	1.968	661
4	858	338	4.423	15
5	195	61	0	0
6	6.046	3.310	44.628	23.322
7	-272	1.223	0	5.587
8	-396	130	0	0
9	4.928	6.611	34.992	45.974
10	-15.495	-3.016	0	0
11	511	691	3.305	4.414
12	6.965	9.917	56.074	70.180
13	623	639	5.327	5.438
14	2.415	7.930	25.208	62.146
15	3.452	2.183	24.101	15.189
16	7.902	10.066	42.353	53.810
17	737	410	1.675	0
18	4.138	3.895	25.013	28.292
19	3.803	3.694	20.289	8.784
20	885	1.145	0	0
21	3.678	6.340	27.180	43.299
22	614	450	2.729	2.433
23	2.090	1.068	18.130	12.182
24	624	639	5.334	5.438
25	1.382	1.220	8.260	5.501
26	823	1.058	1.103	5.370
27	4.434	1.851	41.510	27.391
28	791	1.306	3.704	5.901
29	293	347	0	1.099
30	1.912	2.212	11.622	11.425
	1.505	2.228	13.635	14.795

Source: Elektronischer Bundesanzeiger

The table above shows the average equity values out of a corrected data set, which gives a more realistic point of view.

Result: Delta average EBIT is T€ 723 (48%) and Delta average equity value is T€ 1160 (8,5%) during the regarded period. Comparing these results with the selected 11 Great Place to Work[®] Companies it is evident that there a high difference, not only in the absolute amounts of average EBIT and average equity value , but also in the percentage of raise of the equity value.

	Ø EBIT		Ø Equity Value	
	2006	2008	2006	2008
GPTW Companies	3072	3883	18447	24048
	26,4 %		30,36 %	
30 randomly Selected	1505	2228	13635	14795
	48 %		8,5 %	
Δ	1567	1655	4812	9253

Figure 4.2: Comparison of “Great Place to Work[®]” and randomly selected “normal” companies with correction of negative EV

Source: Great Place to Work[®], Elektronischer Bundesanzeiger

Out of these figures a dataset can be generated, which will be the basis of the following statistical methods.

Based on their equity value and EBIT they can be allocated or numerated with ranks. Since the data for the EBIT and “Equity Value” are absolute figures, basically ad infinitum, we had to standardize the scale for both.

This was achieved by the following procedures:

- To compute the relative EBIT scale rank numbers were developed by assigning “the worst” rank of ten to “the lowest” EBIT and the rank number of one to “the best” EBIT by applying an ordinal measure between one and ten and assigning adjusted ordinal figures to the relative data.
- For the “Equity Value” computation the same procedure was conducted.

After that the companies were divided in the randomly selected “normal” German companies and the selected companies attending the Great Place to Work[®] Contest in years 2007 and 2009. Finally the companies can be marked with their particular ranks. Data tables for these procedures can be found in the Appendix 14 and Appendix 15.

The data sets described above will be the basis for the following analysis. In the next paragraphs the author will do some testing statistics based on this data set.

In order to find out whether the equity values between the GPTW data available and the data of the “normal” German companies differ significantly a Mann-Whitney-Test was conducted.

The Mann-Whitney-Test is a non-parametrical procedure which can be applied without a given normal distribution in the data set.

The analysis based on the Mann-Whitney-Test of the EBIT 2006 comparing the eight Great Place to Work[®] Companies with the 30 randomly selected “normal” German companies show the following results: (The detailed results depicted in the tables can be found in the Appendix 16).

For the 2006 results there is obviously no statistical difference between the eight Great Place to Work[®] Companies and the 30 randomly selected “normal” companies shown by the value for the “Asymptotic Significance” and the “Exact Significance” of 0,616 and 0,686.

From these results alone it could not be stated that Great Place to Work[®] Companies are better than the randomly selected 30 “normal” companies representing the whole population.

The same procedure for 2008 shows an “improved” result in terms of “Asymptotic and Exact Significance” values of 0,122 respective 0,221. But it still means that it cannot be stated superiority in EBIT 2008 of the eight Great Place to Work[®] Companies against the randomly 30 selected “normal” German companies representing the whole population.

The analysis based on the Mann-Whitney-Test “Equity Value” 2006 show the following results:

The Mann-Whitney test procedure for the Equity Value 2006 also shows “Asymptotic Significance and Exact Significance” of 0,200 and 0,219. That means that we cannot state statistical difference even though the data set indicates an “Equity Value” advantage of the eight Great Place to Work[®] Companies.

The Mann-Whitney “Equity Value” test for 2008 becomes statistically much more interesting, because the “Asymptotic Significance and Exact Significance” values “improve” drastically to 0,066 respective 0,074. This means that on a p-level of about 0,07 it can be stated that there is an obvious superiority in the 2008 “Equity Value” of the eight Great Place to Work[®] Companies against the representative remaining 30 randomly selected “normal” German companies.

In the first place the author conducted the Mann-Whitney-test because as a non-parametric test it does not require specific formats of statistical and empirical distributions. Even though we cannot be sure that our sample data for the eight Great Place to Work[®] Companies and the sample of the 30 randomly selected companies are subject to a normal distribution. There are some strong hints this maybe the case:

First, Great Place to Work[®] Company Scores generally follow a normal distribution³⁸⁷ and secondly there is no indication that scores and values of the population of German companies do not follow a normal distribution.³⁸⁸

Therefore the author also conducted a t-test, to find out whether the EBIT and “Equity Value” of the Great Place to Work[®] Companies of 2006 and 2008 are higher than the EBIT and “Equity Value” of the representative sample of the 30 randomly selected companies.

Based on these assumptions the t-test shows the following findings: (The detailed numbers in the tables can be found in the Appendix 17).

→ The EBIT of 2006 of the Great Place to Work[®] Companies and the other 30 randomly selected companies, which represent the population of German companies does not show a statistical difference, meaning the 0-hypotheses of equal EBIT`s cannot be rejected in this case.

The analysis based on the “t-Test” EBIT 2008 shows the following findings:

→ Interestingly, for EBIT 2008 there is a significant difference between the eight Great Place to Work[®] Companies and the 30 randomly selected “normal” German companies on a highly significant level of 0,027.

Therefore it can be stated that the average EBIT 2008 of the eight Great Place to Work[®] Companies is higher than the EBIT 2008 of the representative Group of the 30 randomly selected “normal” German companies.

The next step is to do the statistic calculation for the equity value of these two groups of companies.

The analysis based on the “t-Test” equity value 2006 shows the following findings:

→ The equity value 2006 of the Great Place to Work[®] Companies and the other 30 randomly selected “normal” German companies, which represent the population of German companies does not show a statistical difference, meaning the 0-hypotheses of equal equity value`s cannot be rejected.

Finally the analysis based on the “t-Test” equity value 2008 shows the following findings:

→ Our test procedure indicated, based on the t-value, that the 0-hypotheses (equal equity values) should be rejected that there is an obvious difference between the equity value of

³⁸⁷ www.greatplacetowork.com [2012 October]

³⁸⁸ www.Elektronischerbundesanzeiger.de [2012 October]

the eight Great Place to Work[®] Companies and the 30 randomly selected “normal” German companies (representing population of German companies).

However, the level of significance is relatively non-sufficient.

In sum the author generally states that the Mann-Whitney-Test and the T-Test results support the presumption that higher degrees of employee satisfaction have a positive impact on the company value.

Comparing average Great Place to Work[®] Scores

In this chapter the average score of 11 attending companies will be compared with the average score of the “100 Best” and with the average score of all attending companies, to see if there also can be some remarkable findings.

Table 4.9: Average score of attending 11 companies

Company	2007	2009
1	135,48	130,68
2	133,07	152,80
3	-	129,27
4	165,92	159,38
5	130,65	150,48
6	152,35	132,08
7	112,11	152,80
8	-	134,74
9	-	138,81
10	-	122,17
11	-	126,74
	138,26	139,09

Source: Great Place to Work[®] Institute

For the year 2007 the average total score of all attending companies was 115,9 and for the “100 Best” 132,3.

For the year 2009 the average total score of all attending companies was 107,2 and for the “100 Best” 128,9.

The diversification of these two years is caused by two effects. First, the Great Place to Work[®] Institute has calibrated their validation for the year 2009 new, which leads to a stricter

validation. Second, there is a tendency that more companies take place in the contest knowing that they don't really have a chance.³⁸⁹

Table 4.10: Comparison of average total scores of 11 randomly selected companies

Average Score	2007	2009
11 randomly selected companies	138,26	139,09
Best 100	132,3	128,9
All attending companies	115,9	107,2
Δ Best 100	5,96	10,19
Δ 11 selected to all	22,36	31,89 ⁱ

Source: Great Place to Work[®] Institute

The table above shows that the eleven randomly selected companies are significantly above the average “BEST 100” scores. This is clear and evident, but very interesting is that the average score of “All attending companies” and “Best 100 companies” declined during the regarded period, while the average Great Place to Work[®] Score of the “eleven randomly selected companies” rose during the regarded period. That may lead to the assumption that these eleven companies which are among the “100 Best” could raise their employee satisfaction more than the rest and that they belong to the top rated German companies in terms of employee satisfaction.

4.4. Summarizing findings from the research case

The primary statistical case analyses have produced various complementary findings which can be pointed out as follows:

- There is a strong impact of employee satisfaction on the equity value in a positive way (as shown in the correlation analysis). Our sample of the eleven GPTW companies indicates that their overall employee satisfaction is higher than the average employee satisfaction within the population of German companies.
- Even though the conducted Mann-Whitney-Test and t-test procedures for EBIT and equity value deliver mixed results, there are some indications that the average EBIT and equity value of the eight (only eight out of the eleven showed sufficient financial data in the “Elektronischer Bundesanzeiger”) regarded Great Place to Work[®] Companies may be significantly higher than the EBIT and equity value of the other 30 randomly

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selected “normal” German companies (representing the “population” of German Companies).

- Since it can be presumed that the level of employee satisfaction within the eleven Great Place to Work[®] Companies is generally higher than the level of employee satisfaction of the representative other 30 randomly selected “normal” German companies we may – cum grano salis – postulate:

“Increasing employee satisfaction has a positive impact on the EBIT and therefore on equity value”!

Eventually, the author have to concede that the primary case analysis data set is restricted in terms of volume and sample size, which may limit the research statements and would definitely require more research based on a more voluminous data set and sample size.

CONCLUSIONS AND SUGGESTIONS

Conclusions

This dissertation was based on an extended theoretical research through a literature review regarding workplace environment, leadership style, management methods, company value and employee satisfaction. From this fundamental research this dissertation evaluates the relationship between employee satisfaction and company value in a threefold manner:

A secondary data analysis which also includes a study from the USA in which the results of Great Place to Work[®] were compared with financial results, foster the results before.

An additional primary empirical and statistical analysis with samples of high employee satisfaction score companies and “normal” German companies was conducted.

Thirdly an additional research case study on small sample sizes was performed.

Thus the following conclusions from a research point of view can be formulated:

1. Theoretical and empirical evidence that employee satisfaction is comprised of a set of main elements like credibility, respect, fairness, pride and camaraderie. This means that management science can include those elements in its set of employee satisfaction theories.
2. Theoretical proposition that a set of influencing variables determine business performance, i.e. company value. Employee satisfaction has proven its preeminent role for company success among them.
3. The most likely influencing variables besides employee satisfaction are the following, based on various researchers' suggestions: marketing efficiency, product portfolio and quality, innovation and technological standards, relationship with suppliers and overall market and industry situation and financial authorities.
4. The cause-effect relation between marketing efficiency, product portfolio and quality, innovation and technological standards, relationship with suppliers and overall market and industry situation, financial authorities and the core factor employee satisfaction on the one hand and company value on the other hand has been analytically and empirically established.
5. The results support the presumption that employee satisfaction is among the most important influencing factors. There is empirical evidence that the set of employee satisfaction elements outlined above have an impact on company value in a sense that higher employee satisfaction tendentially increases the company value. This result is based on the secondary empirical analysis of this research.

6. Empirical evidence that indeed companies with tendentially higher degrees of employee satisfaction are probably superior to “average” companies in terms of company value. This result is based on the findings of the conducted primary empirical analyses in this research.
7. The basic hypothesis that “the degree of employee satisfaction has a positive impact on the level of company value” has been overall substantiated.
8. The empirical findings allow for the statement that quantitatively measurable dependencies do exist between employee satisfaction and company value (based on bivariate and multivariate analyses).
9. The research findings allow for the statement that companies should emphasize instruments for increasing overall employee satisfaction in order to substantially develop their company value.
10. Managers and leaders should adopt their style of management to their country and workplace environment – culture and nationality can have an enormous effect on management effectiveness. With the increased importance of multinational companies, it is mandatory for managers that they know how job satisfaction can be influenced in different cultures and how to deal with it.

Suggestions

Reflecting to the main task and the purpose of this dissertation: “To elaborate suggestions for managers and leaders for at last improving their company value”, a number of suggestions were elaborated, which can be given to companies especially to their managers and leaders, for improving employee satisfaction and therefore company value. Those suggestions are supposed to strongly correspond with the overall goal of the managerial approach of improving company value by applying instruments and heuristics to significantly increase the overall level of employee satisfaction. It is intended to stimulate managers and entrepreneurs to sustainably implement those kinds of managerial tools for employee satisfaction enhancement and thus securing a positive company value development.

For improving employee satisfaction and the company value of their firm the author suggests the following improvements or arrangements based on his scientific studies:

1. The author recommends to the management and shareholders improving workplace environment, for rising employee satisfaction consistent with company strategy and according to the elements of the “Great Place to Work[®]” model.

2. For improving the confidence and trust inside the organisation the author proposes to managers to communicate clearly and authentically.
3. The author recommends to the management and the division management to involve their staff. Participative management styles are more appropriate to our modern community and better accepted than autocratic management styles
4. The management and the human resource department should improve companies' job-design. Job design and worker-job match can have a very positive effect on employee satisfaction.
5. It is recommended to the management and shareholders that the jobs of employees should be safe. Job security or insecurity has tremendous effects on employee satisfaction or dissatisfaction.
6. Well-adjusted performance pay systems lead to more job satisfaction; therefore the author proposes that performance pay systems should be verified by the human resource department.
7. Management and shareholders should take care of work-role input vs. output. The relation between work-role input vs. work-role output is important for workforce satisfaction and should be regarded and managed carefully.
8. The author recommends to the shareholders and the human resource management that skills of management and leaders should be checked and improved. The different types of leadership styles need different skills and traits for a successful approach.
9. The management and division heads should be trained in implementing TQM. Managers who know how to implement people related TQM will have the opportunity to create high-performance work place practices while enhancing staff satisfaction.
10. It is recommended to the human resource department by the author that investigations about other HR practices like recruitment/selection, training/qualification and reward systems which match with the company, their employees and their culture should be carried out.
11. The author proposes to the management and the human resource department to implement training on the job. "On the job training" is useful. If it is adjusted to the workplace environment it has positive effects on employee satisfaction.
12. To encourage self-management, is recommended by the author that the management and division managers should let the employees be responsible and involved in change management processes.

13. Finally the author proposes that managers and leaders should permanently communicate with their staff and ask them explicitly for their contribution to continuous task processes improvement. Employees supposedly feel more involved in the organization when their input is requested and therefore that would be the best way that enterprises can apply the suggested procedures and improvements. The process also increases the salience of managerial behaviour towards subordinates to organizational effectiveness and productivity. This shows the importance of the positive involvement of employees in the decision making process or participation of employees in organizational decision making.

To assure the sustainability and objectivity of the implementation of the instruments and the improvements it should be integrated in a controlled change management process with continuous feedback loops.

In sum, the dissertation is aiming to contribute to the theoretical and empirical knowledge of management and business administration, with a particular focus on the element of human resources in professional companies' production and logistical processes. In the author's opinion the dissertation shows that employee satisfaction is not only a theoretical but also an empirically relevant issue of managerial conduct and company performance. But it can be clearly stated that an employee satisfaction oriented human resources management can strongly contribute to business success. Eventually, there is certainly a lot of further research necessary in order to specify other impact factors on company performance as well and clearly identify the position of employee satisfaction within such a scientific and practical context.

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APPENDIX

Appendix 1: Sample feedback report GPTW employee survey 2012/2013

<div style="display: flex; align-items: center;"> <div style="background-color: #a52a2a; color: white; padding: 10px; font-weight: bold; font-size: 24px; text-align: center; width: 150px;"> GREAT PLACE TO WORK® </div> <div style="margin-left: 20px;"> Great Place to Work® employee survey 2012/2013 Feedback Report - Entire company Sample Report </div> </div>		N-Count:	Results overall			Type of job		Gender		Age				
			Staff/Non-management	Manager/Supervisor	Executive/Senior Manager	female	male	25 years and younger	26 to 34 years	35 to 44 years	45 to 54 years	55 years and older		
			217	101	113	*	140	76	34	74	62	37	10	
Credibility	Management keeps me informed about important issues and changes.	81%	79%	84%	*	78%	88%	74%	89%	81%	78%	70%		
	Management makes its expectations clear.	85%	83%	88%	*	84%	88%	76%	86%	87%	92%	70%		
	I can ask management any reasonable question and get a straight answer.	81%	79%	83%	*	80%	83%	68%	86%	77%	95%	60%		
	Management is approachable, easy to talk with.	87%	85%	88%	*	86%	89%	73%	89%	87%	97%	80%		
	Management is competent at running the business.	82%	83%	81%	*	81%	84%	76%	86%	79%	86%	70%		
	Management hires people who fit in well here.	82%	77%	86%	*	79%	88%	82%	80%	87%	84%	60%		
	Management does a good job of assigning and coordinating people.	82%	82%	83%	*	81%	84%	73%	89%	85%	73%	78%		
	Management trusts people to do a good job without watching over their shoulders.	92%	90%	94%	*	90%	96%	91%	86%	97%	97%	90%		
	People here are given a lot of responsibility.	95%	93%	97%	*	94%	97%	94%	93%	98%	97%	90%		
	Management has a clear view of where the organization is going and how to get there.	87%	87%	88%	*	87%	88%	79%	92%	90%	84%	78%		
	Management delivers on its promises.	80%	80%	80%	*	81%	78%	74%	74%	81%	92%	89%		
	My manager's actions match his/her words.	82%	82%	82%	*	80%	84%	78%	84%	81%	84%	78%		
	I believe management would lay people off only as a last resort	91%	90%	93%	*	89%	95%	88%	89%	92%	97%	90%		
	Management is honest and ethical in its business practices.	87%	88%	86%	*	86%	88%	78%	90%	82%	97%	78%		
Respect	I am offered training or development to further myself professionally.	87%	82%	92%	*	84%	93%	79%	80%	95%	97%	80%		
	I am given the resources and equipment to do my job.	97%	95%	99%	*	96%	97%	97%	96%	97%	100%	90%		
	I am able to make the best use of my abilities here. ¹	90%	87%	92%	*	88%	93%	85%	84%	97%	97%	80%		
	Management shows appreciation for good work and extra effort.	69%	64%	73%	*	65%	75%	56%	69%	74%	75%	50%		
	Management recognizes honest mistakes as part of doing business.	87%	88%	87%	*	86%	87%	79%	89%	89%	86%	80%		
	Management genuinely seeks and responds to suggestions and ideas.	80%	76%	83%	*	78%	82%	65%	80%	84%	86%	80%		
	Management involves people in decisions that affect their jobs or work environment.	79%	74%	84%	*	78%	80%	62%	82%	82%	81%	89%		
	This is a physically safe place to work.	98%	98%	97%	*	97%	99%	97%	99%	100%	95%	90%		
	This is a psychologically and emotionally healthy place to work.	64%	58%	70%	*	61%	71%	55%	62%	70%	65%	78%		
	Our facilities contribute to a good working environment.	85%	80%	89%	*	84%	88%	79%	81%	89%	95%	80%		
	People here are supported by helpful measures in promoting health. ¹	62%	53%	70%	*	59%	69%	48%	62%	62%	74%	70%		
	I am able to take time off from work when I think it is necessary.	74%	73%	76%	*	75%	75%	71%	70%	82%	75%	67%		
	People are encouraged to balance their work life and their personal life.	67%	62%	71%	*	66%	68%	67%	60%	74%	70%	60%		
	Management shows a sincere interest in me as a person, not just an employee.	79%	77%	81%	*	78%	83%	74%	80%	79%	83%	78%		
We have special and unique benefits here.	57%	55%	58%	*	58%	56%	53%	58%	56%	57%	67%			



Great Place to Work® employee survey 2012/2013

Feedback Report - Entire company

Sample Report

		Tenure					Work Status		Part of an ethnic or religious minority		highest job related educational attainment				
		2 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	over 20 years	Part-time	Full-time	yes	no	apprenticeship	higher National Diploma, Master Craftsman's university degree in Maths, Computer	university degree in another area	no job related educational attainment	attainment
Credibility	Management keeps me informed about important issues and changes.	88%	77%	75%	83%	*	82%	76%	*	*	79%	88%	67%	83%	100%
	Management makes its expectations clear.	82%	85%	86%	100%	*	85%	89%	*	*	85%	94%	83%	83%	71%
	I can ask management any reasonable question and get a straight answer.	82%	72%	81%	83%	*	81%	76%	*	*	79%	88%	83%	83%	71%
	Management is approachable, easy to talk with.	88%	78%	97%	100%	*	86%	94%	*	*	86%	97%	83%	93%	43%
	Management is competent at running the business.	83%	76%	83%	83%	*	81%	89%	*	*	81%	88%	83%	83%	71%
	Management hires people who fit in well here.	80%	78%	81%	83%	*	82%	78%	*	*	82%	84%	67%	83%	86%
	Management does a good job of assigning and coordinating people.	88%	78%	77%	83%	*	82%	82%	*	*	82%	84%	83%	83%	71%
	Management trusts people to do a good job without watching over their shoulders.	86%	94%	97%	100%	*	91%	100%	*	*	91%	97%	100%	97%	71%
	People here are given a lot of responsibility.	91%	100%	92%	100%	*	95%	94%	*	*	95%	97%	100%	93%	100%
	Management has a clear view of where the organization is going and how to get there.	88%	81%	86%	83%	*	87%	88%	*	*	87%	88%	83%	93%	71%
	Management delivers on its promises.	77%	74%	89%	83%	*	80%	82%	*	*	78%	88%	83%	83%	71%
	My manager's actions match his/her words.	86%	72%	83%	83%	*	82%	82%	*	*	82%	75%	67%	90%	86%
	I believe management would lay people off only as a last resort	91%	91%	94%	100%	*	91%	94%	*	*	89%	94%	100%	97%	86%
Management is honest and ethical in its business practices.	88%	78%	91%	83%	*	86%	94%	*	*	85%	94%	83%	90%	71%	
Respect	I am offered training or development to further myself professionally.	86%	83%	92%	100%	*	87%	89%	*	*	86%	94%	100%	83%	86%
	I am given the resources and equipment to do my job.	94%	98%	100%	100%	*	96%	100%	*	*	96%	100%	100%	97%	86%
	I am able to make the best use of my abilities here. ¹	82%	94%	97%	100%	*	89%	94%	*	*	90%	100%	100%	76%	86%
	Management shows appreciation for good work and extra effort.	65%	65%	67%	83%	*	68%	72%	*	*	68%	78%	60%	67%	57%
	Management recognizes honest mistakes as part of doing business.	82%	91%	83%	100%	*	86%	94%	*	*	86%	88%	83%	93%	71%
	Management genuinely seeks and responds to suggestions and ideas.	79%	76%	83%	100%	*	78%	100%	*	*	80%	78%	80%	90%	43%
	Management involves people in decisions that affect their jobs or work environment.	77%	74%	91%	67%	*	79%	82%	*	*	79%	81%	83%	80%	71%
	This is a physically safe place to work.	97%	100%	97%	100%	*	97%	100%	*	*	99%	97%	100%	97%	86%
	This is a psychologically and emotionally healthy place to work.	61%	67%	60%	83%	*	66%	47%	*	*	62%	72%	80%	69%	57%
	Our facilities contribute to a good working environment.	86%	81%	92%	100%	*	85%	83%	*	*	85%	88%	100%	90%	57%
	People here are supported by helpful measures in promoting health. ¹	63%	60%	72%	80%	*	62%	61%	*	*	61%	70%	50%	77%	14%
	I am able to take time off from work when I think it is necessary.	68%	78%	74%	100%	*	76%	61%	*	*	74%	75%	60%	77%	71%
	People are encouraged to balance their work life and their personal life.	58%	70%	67%	83%	*	66%	72%	*	*	71%	56%	33%	68%	57%
Management shows a sincere interest in me as a person, not just an employee.	80%	78%	77%	83%	*	78%	94%	*	*	79%	78%	60%	83%	86%	
We have special and unique benefits here.	54%	60%	58%	80%	*	58%	47%	*	*	59%	63%	40%	44%	43%	



Great Place to Work® employee survey 2012/2013
 Feedback Report - Entire company
Sample Report

		N-Count:	Results overall	Type of job			Gender		Age				
				Staff/Non-management	Manager/Supervisor	Executive/Senior Manager	female	male	25 years and younger	26 to 34 years	35 to 44 years	45 to 54 years	55 years and older
		217	101	113	*	140	76	34	74	62	37	10	
Fairness	People here are paid fairly for the work they do.	64%	64%	63%	*	66%	62%	56%	53%	77%	69%	67%	
	I feel I receive a fair share of the profits made by this organization. ¹	64%	60%	69%	*	63%	67%	58%	66%	61%	74%	60%	
	Everyone has an opportunity to get special recognition.	78%	73%	83%	*	75%	84%	65%	81%	82%	81%	70%	
	I am treated as a full member here regardless of my position.	93%	90%	96%	*	89%	100%	82%	95%	98%	95%	80%	
	Promotions go to those who best deserve them.	65%	61%	69%	*	63%	68%	55%	60%	75%	69%	67%	
	Managers avoid playing favorites.	73%	76%	70%	*	73%	71%	61%	77%	73%	78%	56%	
	People avoid politicking and backstabbing as ways to get things done.	81%	77%	85%	*	80%	83%	88%	74%	85%	86%	63%	
	People here are treated fairly regardless of their age.	93%	91%	94%	*	91%	95%	94%	92%	93%	95%	80%	
	People here are treated fairly regardless of their race or ethnicity.	99%	100%	98%	*	99%	99%	100%	99%	100%	100%	90%	
	People here are treated fairly regardless of their sex.	97%	98%	96%	*	95%	100%	100%	97%	100%	92%	80%	
People here are treated fairly regardless of their sexual orientation.	98%	99%	96%	*	97%	99%	100%	99%	98%	97%	78%		
People here are treated fairly regardless of disability. ¹	98%	98%	97%	*	96%	100%	97%	97%	100%	100%	78%		
If I am unfairly treated, I believe I'll be given a fair shake if I appeal.	80%	79%	81%	*	78%	83%	63%	84%	84%	84%	70%		
Pride	I feel I make a difference here.	92%	90%	93%	*	91%	92%	91%	88%	95%	95%	90%	
	My work has special meaning: this is not 'just a job'.	94%	88%	98%	*	91%	99%	85%	92%	98%	97%	90%	
	When I look at what we accomplish, I feel a sense of pride.	93%	88%	96%	*	91%	96%	82%	93%	97%	94%	90%	
	People here are willing to give extra to get the job done.	93%	93%	93%	*	94%	92%	85%	93%	97%	95%	90%	
	I want to work here for a long time.	92%	90%	94%	*	91%	95%	88%	90%	97%	95%	80%	
	I'm proud to tell others I work here.	87%	81%	92%	*	86%	89%	79%	86%	89%	95%	80%	
	I would recommend the company as an employer to good acquaintances. ¹	88%	85%	92%	*	85%	95%	82%	85%	94%	95%	80%	
	I can highly recommend products and services of our company to potential clients. ¹	93%	88%	96%	*	90%	97%	88%	91%	95%	97%	90%	
People look forward to coming to work here.	89%	88%	89%	*	87%	92%	79%	90%	95%	89%	70%		
I feel good about the ways we contribute to the community.	90%	87%	93%	*	89%	92%	82%	91%	94%	97%	70%		
Camaraderie	I can be myself around here.	94%	93%	95%	*	92%	97%	97%	91%	98%	95%	80%	
	People celebrate special events around here.	78%	72%	85%	*	76%	83%	68%	80%	79%	89%	60%	
	People care about each other here.	90%	86%	93%	*	87%	95%	85%	92%	94%	89%	67%	
	This is a friendly place to work.	95%	94%	96%	*	94%	97%	88%	99%	98%	89%	90%	
	This is a fun place to work.	91%	87%	94%	*	91%	91%	88%	89%	92%	95%	90%	
	When you join the company, you are made to feel welcome.	96%	95%	97%	*	94%	100%	91%	97%	100%	95%	89%	
	When people change jobs or work units, they are made to feel right at home.	94%	92%	94%	*	94%	93%	97%	97%	95%	85%	80%	
	There is a 'family' or 'team' feeling here.	86%	81%	91%	*	82%	93%	76%	89%	89%	89%	70%	
We're all in this together.	86%	80%	90%	*	83%	89%	79%	91%	84%	89%	70%		
You can count on people to cooperate.	86%	82%	90%	*	81%	95%	71%	88%	89%	92%	90%		
Taking everything into account, I would say this is a great place to work.		91%	89%	93%	*	89%	95%	85%	91%	97%	92%	80%	
Trust Index©		85%	83%	87%	*	84%	88%	79%	85%	88%	88%	77%	



Great Place to Work® employee survey 2012/2013
 Feedback Report - Entire company
Sample Report

	N-Count:	Tenure						Work Status		ethnic or		attainment				
		less than 2 years	2 to 5 years	6 to 10 years	11 to 15 years	16 to 20 years	over 20 years	Part-time	Full-time	yes	no	apprentice ship	higher National Diploma	university degree in Math/s.	university degree in another	no job related education
Fairness	People here are paid fairly for the work they do.	67%	57%	63%	71%	100%	*	64%	59%	*	*	142	32	6	30	7
	I feel I receive a fair share of the profits made by this organization. ¹	73%	55%	63%	66%	100%	*	64%	71%	*	*	62%	81%	50%	63%	57%
	Everyone has an opportunity to get special recognition.	85%	74%	72%	83%	100%	*	77%	89%	*	*	80%	84%	67%	73%	57%
	I am treated as a full member here regardless of my position.	94%	91%	93%	97%	100%	*	93%	89%	*	*	93%	94%	100%	90%	100%
	Promotions go to those who best deserve them.	69%	63%	64%	65%	83%	*	66%	56%	*	*	64%	72%	80%	63%	57%
	Managers avoid playing favorites.	87%	73%	59%	71%	83%	*	73%	71%	*	*	70%	84%	67%	79%	57%
	People avoid politicking and backstabbing as ways to get things done.	77%	85%	76%	88%	100%	*	80%	94%	*	*	82%	81%	80%	80%	71%
	People here are treated fairly regardless of their age.	98%	95%	83%	94%	100%	*	93%	89%	*	*	92%	97%	83%	97%	71%
	People here are treated fairly regardless of their race or ethnicity.	98%	100%	100%	100%	100%	*	99%	100%	*	*	99%	100%	100%	100%	100%
	People here are treated fairly regardless of their sex.	98%	98%	96%	94%	100%	*	97%	89%	*	*	96%	97%	100%	100%	100%
	People here are treated fairly regardless of their sexual orientation.	98%	100%	98%	94%	100%	*	98%	94%	*	*	97%	97%	100%	100%	100%
	People here are treated fairly regardless of disability. ¹	100%	97%	98%	97%	100%	*	97%	100%	*	*	97%	97%	100%	100%	100%
	If I am unfairly treated, I believe I'll be given a fair shake if I appeal.	88%	75%	78%	81%	83%	*	80%	82%	*	*	76%	90%	83%	90%	57%
Pride	I feel I make a difference here.	93%	86%	94%	97%	100%	*	91%	100%	*	*	94%	97%	100%	77%	86%
	My work has special meaning: this is not 'just a job'.	94%	86%	98%	100%	100%	*	93%	100%	*	*	92%	100%	100%	90%	100%
	When I look at what we accomplish, I feel a sense of pride.	92%	88%	94%	100%	100%	*	92%	100%	*	*	92%	94%	100%	93%	86%
	People here are willing to give extra to get the job done.	98%	89%	89%	100%	100%	*	93%	89%	*	*	92%	100%	83%	93%	86%
	I want to work here for a long time.	92%	88%	94%	97%	100%	*	91%	100%	*	*	92%	97%	83%	93%	86%
	I'm proud to tell others I work here.	89%	85%	85%	92%	100%	*	86%	100%	*	*	87%	91%	83%	83%	86%
	I would recommend the company as an employer to good acquaintances. ¹	89%	83%	91%	94%	100%	*	87%	100%	*	*	88%	97%	83%	83%	86%
	I can highly recommend products and services of our company to potential clients. ¹	91%	91%	93%	100%	100%	*	92%	100%	*	*	92%	100%	100%	93%	71%
Camaraderie	People look forward to coming to work here.	93%	85%	89%	92%	100%	*	89%	89%	*	*	89%	97%	83%	90%	57%
	I feel good about the ways we contribute to the community.	89%	88%	93%	94%	100%	*	89%	100%	*	*	89%	94%	100%	90%	86%
	I can be myself around here.	94%	92%	94%	97%	100%	*	94%	89%	*	*	94%	100%	100%	87%	100%
	People celebrate special events around here.	78%	79%	80%	78%	83%	*	79%	67%	*	*	80%	72%	67%	87%	43%
	People care about each other here.	91%	94%	81%	94%	100%	*	90%	82%	*	*	90%	88%	83%	93%	86%
	This is a friendly place to work.	100%	94%	94%	94%	83%	*	96%	83%	*	*	94%	97%	83%	100%	100%
	This is a fun place to work.	93%	89%	89%	97%	83%	*	90%	94%	*	*	90%	97%	83%	90%	86%
	When you join the company, you are made to feel welcome.	98%	94%	96%	100%	100%	*	96%	94%	*	*	95%	100%	100%	97%	100%
When people change jobs or work units, they are made to feel right at home.	98%	95%	88%	94%	100%	*	93%	94%	*	*	94%	94%	80%	96%	86%	
There is a 'family' or 'team' feeling here.	87%	89%	83%	86%	83%	*	87%	72%	*	*	87%	91%	83%	90%	43%	
We're all in this together.	91%	89%	76%	89%	83%	*	86%	78%	*	*	86%	91%	100%	83%	57%	
You can count on people to cooperate.	89%	85%	83%	89%	100%	*	86%	83%	*	*	85%	94%	100%	86%	71%	
Taking everything into account, I would say this is a great place to work.	93%	88%	93%	94%	###	*	91%	94%	*	*	90%	97%	83%	93%	86%	
Trust Index®	88%	84%	83%	87%	93%	*	85%	86%	*	*	85%	89%	84%	86%	76%	

Datacollection 2012 1) Item disregarded for Trust Index®


Depiction: Top Box-Values = Percentages of positive answers ("almost always true" + "often true")

* = less than 5 answers, results are notindicated

Legende: < 60 % 60 - 80% > 80 %

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Appendix 2: Benchmarks from best companies to work for in Germany 2012

 Benchmarks from "Best Companies to work for in Germany 2012"		Top 10 companies	Top 50 companies	Top 100 companies
		N-Count:	1554	10930
Credibility	Management keeps me informed about important issues and changes.	90%	80%	76%
	Management makes its expectations clear.	91%	82%	78%
	I can ask management any reasonable question and get a straight answer.	93%	87%	84%
	Management is approachable, easy to talk with.	93%	88%	84%
	Management is competent at running the business.	93%	85%	83%
	Management hires people who fit in well here.	90%	84%	81%
	Management does a good job of assigning and coordinating people.	87%	78%	73%
	Management trusts people to do a good job without watching over their shoulders.	96%	91%	89%
	People here are given a lot of responsibility.	96%	91%	88%
	Management has a clear view of where the organization is going and how to get there.	91%	83%	80%
	Management delivers on its promises.	91%	83%	80%
	My manager's actions match his/her words.	92%	81%	78%
	I believe management would lay people off only as a last resort	93%	90%	89%
	Management is honest and ethical in its business practices.	96%	92%	89%
Respect	I am offered training or development to further myself professionally.	88%	80%	76%
	I am given the resources and equipment to do my job.	96%	91%	90%
	I am able to make the best use of my abilities here. ¹	90%	83%	82%
	Management shows appreciation for good work and extra effort.	88%	79%	74%
	Management recognizes honest mistakes as part of doing business.	94%	89%	85%
	Management genuinely seeks and responds to suggestions and ideas.	92%	83%	79%
	Management involves people in decisions that affect their jobs or work environment.	86%	75%	70%
	This is a physically safe place to work.	98%	97%	95%
	This is a psychologically and emotionally healthy place to work.	81%	73%	67%
	Our facilities contribute to a good working environment.	93%	86%	82%
	People here are supported by helpful measures in promoting health. ¹	86%	77%	72%
	I am able to take time off from work when I think it is necessary.	89%	82%	78%
	People are encouraged to balance their work life and their personal life.	86%	76%	69%
	Management shows a sincere interest in me as a person, not just an employee.	92%	82%	77%
We have special and unique benefits here.	83%	73%	68%	
Fairness	People here are paid fairly for the work they do.	77%	69%	65%
	I feel I receive a fair share of the profits made by this organization. ¹	81%	72%	67%
	Everyone has an opportunity to get special recognition.	91%	83%	79%
	I am treated as a full member here regardless of my position.	96%	93%	91%
	Promotions go to those who best deserve them.	80%	68%	63%
	Managers avoid playing favorites.	86%	80%	75%
	People avoid politicking and backstabbing as ways to get things done.	91%	85%	81%
	People here are treated fairly regardless of their age.	95%	93%	91%
	People here are treated fairly regardless of their race or ethnicity.	99%	99%	98%
	People here are treated fairly regardless of their sex.	97%	96%	95%
	People here are treated fairly regardless of their sexual orientation.	99%	98%	98%
	People here are treated fairly regardless of disability. ¹	98%	97%	97%
	If I am unfairly treated, I believe I'll be given a fair shake if I appeal.	90%	84%	81%
	Pride	I feel I make a difference here.	93%	87%
My work has special meaning: this is not 'just a job'.		93%	88%	87%
When I look at what we accomplish, I feel a sense of pride.		96%	90%	88%
People here are willing to give extra to get the job done.		93%	90%	88%
I want to work here for a long time.		92%	87%	85%
I'm proud to tell others I work here.		94%	90%	88%
I would recommend the company as an employer to good acquaintances. ¹		94%	88%	86%
I can highly recommend products and services of our company to potential clients. ¹		97%	94%	93%
People look forward to coming to work here.		94%	87%	84%
I feel good about the ways we contribute to the community.		91%	86%	84%
Camaraderie	I can be myself around here.	94%	89%	87%
	People celebrate special events around here.	95%	88%	85%
	People care about each other here.	93%	89%	86%
	This is a friendly place to work.	98%	95%	93%
	This is a fun place to work.	95%	88%	86%
	When you join the company, you are made to feel welcome.	98%	95%	94%
	When people change jobs or work units, they are made to feel right at home.	95%	92%	90%
	There is a 'family' or 'team' feeling here.	92%	86%	82%
	We're all in this together.	92%	85%	80%
	You can count on people to cooperate.	91%	85%	83%
Taking everything into account, I would say this is a great place to work		96%	92%	90%
Trust Index®		92%	86%	83%

Data collection 2011 ¹ Item disregarded for Trust Index®

Depiction: Top Box-Values = Percentages of positive answers ("almost always true" + "often true")

Key: < 60 % 60 - 80 % > 80 %

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Appendix 3: Detailed calculation of the EBIT and EV - 30 randomly selected GPTW companies

Company 1	in TEUR	2006	2008
EBIT		2217	1337
x Multiplier		6,95	6,95
= company value		15408,2	9292,2
- bank debts		13635	360
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		411	338,5
= purchase price / equity value		2184,2	9270,7
Company 2	in TEUR	2006	2006
EBIT		943,1	1090,7
x Multiplier		6,45	6,45
= company value		6083,0	7035,0
- bank debts		1,5	1416
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		610	592,8
= purchase price / equity value		6691,5	6211,8
Company 3	in TEUR	2006	2008
EBIT		6456,9	6457
x Multiplier		6,55	6,55
= company value		42292,7	42293,4
- bank debts		2153	2570
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		11	7,9
= purchase price / equity value		40150,7	39731,3
Company 4	in TEUR	2006	2008
EBIT		6705,6	3819,4
x Multiplier		6,45	6,45
= company value		43251,1	24635,1
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		49571	47199
= purchase price / equity value		92822,1	71834,1
Company 5	in TEUR	2006	2008
EBIT		66195,8	65037,6
x Multiplier		7,3	7,3
= company value		483229,3	474774,5
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		164,9	252,8
= purchase price / equity value		483394,2	475027,3
Company 6	in TEUR	2006	2008
EBIT		254,2	721,8
x Multiplier		6,65	6,65
= company value		1690,4	4800,0
- bank debts		1177,2	1310
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1321	845,8
= purchase price / equity value		1834,2	4335,8
Company 7	in TEUR	2006	2008
EBIT		-99	207,3
x Multiplier		7,3	7,3
= company value		-722,7	1513,3
- bank debts		1714	1059
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		21	29
= purchase price / equity value		-2415,7	483,3

Company 8	in TEUR	2006	2008
EBIT		6589,2	59299,4
x Multiplier		6	6
= company value		39535,2	355796,4
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		3967,4	6447,4
= purchase price / equity value		43502,6	362243,8
Company 9	in TEUR	2006	2008
EBIT		1663,6	774,2
x Multiplier		6	6
= company value		9981,6	4645,2
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		895	905,2
= purchase price / equity value		10876,6	5550,4
Company 10	in TEUR	2006	2008
EBIT		8211,8	2507,6
x Multiplier		7,3	7,3
= company value		59946,1	18305,5
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		41723	41644
= purchase price / equity value		101669,5	59949,5
Company 11	in TEUR	2006	2008
EBIT		-389,5	1440,5
x Multiplier		7,3	7,3
= company value		-2843,4	10515,7
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		21,3	32
= purchase price / equity value		-2822,1	10547,4
Company 12	in TEUR	2006	2008
EBIT		693	7168,3
x Multiplier		7,3	7,3
= company value		5058,9	52328,6
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		0,6	0,6
= purchase price / equity value		5059,5	52329,2
Company 13	in TEUR	2006	2008
EBIT		1995,6	2440,6
x Multiplier		7,3	7,3
= company value		14567,9	17816,4
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		934,3	1585,9
= purchase price / equity value		15502,2	19402,3
Company 14	in TEUR	2006	2008
EBIT		-8204,7	-11681,3
x Multiplier		6,45	6,45
= company value		-52920,3	-75344,4
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		8	5,7
= purchase price / equity value		-52912,3	-75338,7

Company 15	in TEUR	2006	2008
EBIT		7432	12261,1
x Multiplier		6	6
= company value		44592,0	73566,6
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		2370	2635,6
= purchase price / equity value		46962,0	76202,2
Company 16	in TEUR	2006	2008
EBIT		9299,4	11189
x Multiplier		6,55	6,55
= company value		60911,1	73288,0
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		942	1775
= purchase price / equity value		61853,1	75062,7
Company 17	in TEUR	2006	2008
EBIT		-939,5	-1031,3
x Multiplier		6,3	6,3
= company value		-5918,9	-6497,2
- bank debts		1331	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		581	159
= purchase price / equity value		-6668,9	-6338,2
Company 18	in TEUR	2006	2008
EBIT		3924	578,4
x Multiplier		6,55	6,55
= company value		25702,2	3788,5
- bank debts		0	10592
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		29523,8	32784
= purchase price / equity value		55226,0	25980,1
Company 19	in TEUR	2006	2008
EBIT		2422,3	2178,2
x Multiplier		6,55	6,55
= company value		15866,1	14267,2
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		4547	4396,4
= purchase price / equity value		20412,9	18663,6
Company 20	in TEUR	2006	2008
EBIT		3373,6	4134,9
x Multiplier		6,55	6,55
= company value		22097,1	27083,6
- bank debts		0	784,7
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		2978	2007
= purchase price / equity value		25074,8	28305,9
Company 21	in TEUR	2006	2008
EBIT		2538,8	1655,6
x Multiplier		6	6
= company value		15232,8	9933,6
- bank debts		37	4
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		88	237,3
= purchase price / equity value		15283,4	10167,4

Company 22	in TEUR	2006	2008
EBIT		1493,2	3197,7
x Multiplier		6,8	6,8
= company value		10153,8	21744,4
- bank debts		1158	970
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		237	2012
= purchase price / equity value		9232,8	22785,7
Company 23	in TEUR	2006	2008
EBIT		527,8	493,6
x Multiplier		5,4	5,4
= company value		2850,1	2665,4
- bank debts		1109	1126
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		557,3	8974
= purchase price / equity value		2298,4	10512,9
Company 24	in TEUR	2006	2008
EBIT		5699,4	6441,7
x Multiplier		6,1	6,1
= company value		34766,3	39294,4
- bank debts		1334	2443,3
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1229,8	3744,7
= purchase price / equity value		34662,1	40595,8
Company 25	in TEUR	2006	2008
EBIT		8130,7	1873,3
x Multiplier		7,3	7,3
= company value		59354,1	13675,1
- bank debts		293	1409
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		28784,6	37876
= purchase price / equity value		87845,7	50142,1
Company 26	in TEUR	2006	2008
EBIT		1674	1422,3
x Multiplier		7,3	7,3
= company value		12220,2	10382,8
- bank debts		0	86
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		402,4	0
= purchase price / equity value		12622,6	10296,8
Company 27	in TEUR	2006	2008
EBIT		3697,1	4870,7
x Multiplier		6,95	6,95
= company value		25694,8	33851,4
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		4098,1	855,4
= purchase price / equity value		29792,9	34706,8
Company 28	in TEUR	2006	2008
EBIT		1024	1093,1
x Multiplier		6,55	6,55
= company value		6707,2	7159,8
- bank debts		1617	1209
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1350	641,7
= purchase price / equity value		6440,2	6592,5

Company 29	in TEUR	2006	2008
EBIT		1069,5	2047,1
x Multiplier		6,55	6,55
= company value		7005,2	13408,5
- bank debts		34,5	34,5
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		207	478
= purchase price / equity value		7177,7	13852,0
Company 30	in TEUR	2006	2008
EBIT		2064,3	4288,8
x Multiplier		6,55	6,55
= company value		13521,2	28091,6
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		164,5	408
= purchase price / equity value		13685,7	28499,6

Source: Elektronischer Bundesanzeiger

**Appendix 4: Detailed calculation of the EBIT and EV - 30 randomly selected
“normal” German companies**

Company 1	in TEUR	2006	2008
EBIT		508	466
x Multiplier		6,45	6,45
= company value		3276,6	3005,7
- bank debts		3605	4817
- additional interest bearing debts (e.g. mezzanine)			
+ cash resources (fixed deposits, cash, etc.)		312	135
= purchase price / equity value		-16,4	-1676,3
Company 2	in TEUR	2006	2008
EBIT		407	520
x Multiplier		6,45	6,45
= company value		2625,15	3354
- bank debts		0	5463
- additional interest bearing debts (e.g. mezzanine)		2619	0
+ cash resources (fixed deposits, cash, etc.)		123	711
= purchase price / equity value		129,15	-1398
Company 3	in TEUR	2006	2008
EBIT		303	126
x Multiplier		6,45	6,45
= company value		1954,35	812,7
- bank debts		0	196
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		14	44
= purchase price / equity value		1968,35	660,7
Company 4	in TEUR	2006	2008
EBIT		858	338
x Multiplier		6,45	6,45
= company value		5534,1	2180,1
- bank debts		1124	2173
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		13	8
= purchase price / equity value		4423,1	15,1
Company 5	in TEUR	2006	2008
EBIT		195	61
x Multiplier		6,45	6,45
= company value		1257,75	393,45
- bank debts		3508	4591
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		96	125
= purchase price / equity value		-2154,25	-4072,55
Company 6	in TEUR	2006	2008
EBIT		6046	3310
x Multiplier		6,95	6,95
= company value		42019,7	23004,5
- bank debts		174	87
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		2782	404
= purchase price / equity value		44627,7	23321,5
Company 7	in TEUR	2006	2008
EBIT		-272	1223
x Multiplier		6,8	6,8
= company value		-1849,6	8316,4
- bank debts		1826	3500
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		58	771
= purchase price / equity value		-3617,6	5587,4

Company 8	in TEUR	2006	2008
EBIT		-396	130
x Multiplier		6,1	6,1
= company value		-2415,6	793
- bank debts		60	1055
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		130	40
= purchase price / equity value		-2345,6	-222
Company 9	in TEUR	2006	2008
EBIT		4928	6611
x Multiplier		6,95	6,95
= company value		34249,6	45946,45
- bank debts		335	52
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1077	80
= purchase price / equity value		34991,6	45974,45
Company 10	in TEUR	2006	2008
EBIT		-15495	-3016
x Multiplier		6,95	6,95
= company value		-107690,25	-20961,2
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		4	4526
= purchase price / equity value		-107686	-16435
Company 11	in TEUR	2006	2008
EBIT		511	691
x Multiplier		4,7	4,7
= company value		2401,7	3247,7
- bank debts		173	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1076	1166
= purchase price / equity value		3304,7	4413,7
Company 12	in TEUR	2006	2008
EBIT		6965	9917
x Multiplier		6	6
= company value		41790	59502
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		14284	10678
= purchase price / equity value		56074	70180
Company 13	in TEUR	2006	2008
EBIT		623	639
x Multiplier		6,95	6,95
= company value		4329,85	4441,05
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		997	997
= purchase price / equity value		5326,85	5438,05
Company 14	in TEUR	2006	2008
EBIT		2415	7930
x Multiplier		5,6	5,6
= company value		13524	44408
- bank debts		1175	2659
- additional interest bearing debts (e.g. mezzanine)			
+ cash resources (fixed deposits, cash, etc.)		12859	20397
= purchase price / equity value		25208	62146

Company 15	in TEUR	2006	2008
EBIT		3452	2183
x Multiplier		6,95	6,95
= company value		23991,4	15171,85
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		110	17
= purchase price / equity value		24101,4	15188,85
Company 16	in TEUR	2006	2008
EBIT		7902	10066
x Multiplier		5,6	5,6
= company value		44251,2	56369,6
- bank debts		2343	2786
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		445	226
= purchase price / equity value		42353,2	53809,6
Company 17	in TEUR	2006	2008
EBIT		737	410
x Multiplier		6,95	6,95
= company value		5122,15	2849,5
- bank debts		3523	5897
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		76	878
= purchase price / equity value		1675,15	-2169,5
Company 18	in TEUR	2006	2008
EBIT		4138	3895
x Multiplier		6,95	6,95
= company value		28759,1	27070,25
- bank debts		4080	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		334	1222
= purchase price / equity value		25013,1	28292,25
Company 19	in TEUR	2006	2008
EBIT		3803	3694
x Multiplier		6,1	6,1
= company value		23198,3	22533,4
- bank debts		4533	13920
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		1624	171
= purchase price / equity value		20289,3	8784,4
Company 20	in TEUR	2006	2008
EBIT		885	1145
x Multiplier		6,1	6,1
= company value		5398,5	6984,5
- bank debts		7215	8196
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		119	195
= purchase price / equity value		-1697,5	-1016,5
Company 21	in TEUR	2006	2008
EBIT		3678	6340
x Multiplier		6,1	6,1
= company value		22435,8	38674
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		4744	4625
= purchase price / equity value		27179,8	43299

Company 22	in TEUR	2006	2008
EBIT		614	450
x Multiplier		4,7	4,7
= company value		2885,8	2115
- bank debts		550	51
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		393	369
= purchase price / equity value		2728,8	2433
Company 23	in TEUR	2006	2008
EBIT		2090	1068
x Multiplier		6,1	6,1
= company value		12749	6514,8
- bank debts		1469	1149
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		6850	6816
= purchase price / equity value		18130	12181,8
Company 24	in TEUR	2006	2008
EBIT		624	639
x Multiplier		6,95	6,95
= company value		4336,8	4441,05
- bank debts		0	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		997	997
= purchase price / equity value		5333,8	5438,05
Company 25	in TEUR	2006	2008
EBIT		1382	1220
x Multiplier		5,6	5,6
= company value		7739,2	6832
- bank debts		1460	1965
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		1981	634
= purchase price / equity value		8260,2	5501
Company 26	in TEUR	2006	2008
EBIT		823	1058
x Multiplier		6,8	6,8
= company value		5596,4	7194,4
- bank debts		4615	1841
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		122	17
= purchase price / equity value		1103,4	5370,4
Company 27	in TEUR	2006	2008
EBIT		4434	1851
x Multiplier		6,3	6,3
= company value		27934,2	11661,3
- bank debts		750	0
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		14326	15730
= purchase price / equity value		41510,2	27391,3
Company 28	in TEUR	2006	2008
EBIT		791	1306
x Multiplier		5,4	5,4
= company value		4271,4	7052,4
- bank debts		1064	1685
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		497	534
= purchase price / equity value		3704,4	5901,4

Company 29	in TEUR	2006	2008
EBIT		293	347
x Multiplier		6,8	6,8
= company value		1992,4	2359,6
- bank debts		2646	1280
- additional interest bearing debts (e.g. mezzanine)		0	0
+ cash resources (fixed deposits, cash, etc.)		37	19
= purchase price / equity value		-616,6	1098,6
Company 30	in TEUR	2006	2008
EBIT		1912	2212
x Multiplier		6,1	6,1
= company value		11663,2	13493,2
- bank debts		157	2395
- additional interest bearing debts (e.g. mezzanine)			0
+ cash resources (fixed deposits, cash, etc.)		116	327
= purchase price / equity value		11622,2	11425,2

Source: Elektronischer Bundesanzeiger

Appendix 5: Brenninger H.-J., Average EBIT und EV of 30 randomly selected GPTW Companies without correction of negative EV

Company	EBIT in T€		Equity value in T€		Equity value on total Assets in %		Equity value on Sales in %	
	2006	2008	2006	2008	2006	2008	2006	2008
1	2.217	1.337	2.184	9.271	2,2	11,0	1,1	4,3
2	943	1.091	6.691	6.212	175,0	146,3	0,0	0,0
3	6.457	6.457	40.151	39.731	407,1	405,5	67,7	55,7
4	6.706	3.819	92.822	71.834	139,5	101,0	258,6	197,4
5	66.196	65.038	483.394	475.027	199,4	132,6	258,6	312,1
6	254	722	1.834	4.336	50,5	94,2	0,0	0,0
7	-99	207	-2.416	483	-90,5	19,6	0,0	3,7
8	6.589	59.299	43.503	362.244	179,3	1.382,0	75,0	551,6
9	1.664	774	10.877	5.550	187,9	103,0	62,0	36,1
10	8.212	2.508	101.670	59.949	98,2	54,0	187,0	110,6
11	-390	1.441	-2.822	10.547	-11,6	51,2	-2,5	8,8
12	693	7.168	5.060	52.329	24,4	178,3	5,2	56,8
13	1.996	2.441	15.502	19.402	53,7	25,0	55,9	22,3
14	-8.205	-11.681	-52.912	-75.339	-72,9	-94,9	-73,5	-115,8
15	7.432	12.261	46.962	76.202	118,5	148,7	37,4	45,0
16	9.299	11.189	61.853	75.063	503,8	557,7	0,0	0,0
17	-940	-1.031	-6.669	-6.338	-15,0	-16,4	-6,7	-6,9
18	3.924	578	55.226	25.980	36,3	17,9	36,7	21,8
19	2.422	2.178	20.413	18.664	101,9	106,0	68,2	58,7
20	3.374	4.135	25.075	28.306	50,4	54,1	57,2	44,5
21	2.539	1.656	15.283	10.167	69,4	66,4	105,3	67,4
22	1.493	3.198	9.233	22.786	91,4	145,9	0,0	0,0
23	528	494	2.298	10.513	67,5	113,5	20,7	101,4
24	5.699	6.442	34.662	40.596	165,9	148,9	81,7	73,0
25	8.131	1.873	87.846	50.142	158,3	85,4	131,5	75,5
26	1.674	1.422	12.623	10.297	75,3	42,1	132,5	95,7
27	3.697	4.871	29.793	34.707	294,9	406,9	0,0	0,0
28	1.024	1.093	6.440	6.593	83,4	89,1	0,0	0,0
29	1.070	2.047	7.178	13.852	193,6	213,0	207,3	158,7
30	2.064	4.289	13.686	28.500	109,3	143,3	39,6	64,2
Average	4.889	6.577	38.915	49.587	115	164	60	68

Source: Elektronischer Bundesanzeiger

**Appendix 6: Brenninger H.-J., Average EBIT und EV of 30 randomly selected
“normal” German companies without correction of negative EV**

Company	EBIT in T€		Equity value in T€		Equity value on total Assets in %		Equity value on Sales in %	
	2006	2008	2006	2008	2006	2008	2006	2008
1	508	466	-16	-1.676	-0,3	-23,8	-0,1	-10,7
2	407	520	129	-1.398	2,8	-17,9	0,0	0,0
3	303	126	1.968	661	25,5	8,6	0,0	0,0
4	858	338	4.423	15	74,7	0,2	0,0	0,0
5	195	61	-2.154	-4.073	-43,9	-73,6	0,0	0,0
6	6.046	3.310	44.628	23.322	244,1	236,1	346,6	0,0
7	-272	1.223	-3.618	5.587	-33,8	59,5	0,0	0,0
8	-396	130	-2.346	-222	-39,5	-2,6	0,0	0,0
9	4.928	6.611	34.992	45.974	329,1	398,6	116,2	156,5
10	-15.495	-3.016	-107.686	-16.435	-183,7	-19,1	-375,0	-84,6
11	511	691	3.305	4.414	81,9	86,7	34,5	0,0
12	6.965	9.917	56.074	70.180	178,2	243,8	100,2	103,4
13	623	639	5.327	5.438	26,8	24,2	40,9	40,6
14	2.415	7.930	25.208	62.146	258,5	317,4	77,0	107,7
15	3.452	2.183	24.101	15.189	46,2	30,0	34,7	26,6
16	7.902	10.066	42.353	53.810	150,1	168,7	41,1	44,0
17	737	410	1.675	-2.170	21,1	-18,0	12,5	0,0
18	4.138	3.895	25.013	28.292	146,0	206,1	73,6	74,0
19	3.803	3.694	20.289	8.784	45,3	16,0	20,9	7,3
20	885	1.145	-1.698	-1.017	-11,6	-5,6	0,0	-2,7
21	3.678	6.340	27.180	43.299	59,1	86,4	42,4	56,5
22	614	450	2.729	2.433	25,4	29,0	0,0	5,9
23	2.090	1.068	18.130	12.182	82,9	49,9	0,0	0,0
24	624	639	5.334	5.438	26,9	24,2	40,9	40,6
25	1.382	1.220	8.260	5.501	63,9	47,8	0,0	0,0
26	823	1.058	1.103	5.370	6,2	31,8	0,0	0,0
27	4.434	1.851	41.510	27.391	65,8	38,9	34,8	18,0
28	791	1.306	3.704	5.901	73,5	148,6	0,0	0,0
29	293	347	-617	1.099	-8,7	11,8	-2,6	0,0
30	1.912	2.212	11.622	11.425	308,4	242,6	94,6	67,6
Average	1.505	2.228	9.697	13.895	67	78	24	22

Source: Elektronischer Bundesanzeiger

Appendix 7: Unpaired t-tests

Unpaired t-test for EV 2006 shows the following results

Enter Data: first row = 30 randomly selected "normal" German Companies / second row = 30 randomly selected GPTW companies

P value and statistical significance:

- The two-tailed P value equals 0.1001
- By conventional criteria, this difference is considered to be not statistically significant.

Confidence interval:

- The mean of Group One minus Group Two equals -27440.07
- 95% confidence interval of this difference: From -60309.61 to 5429.48

Intermediate values used in calculations:

- $t = 1.6711$
- $df = 58$
- standard error of difference = 16420.674

Data review:

Group	Group One	Group Two
Mean	13635.23	41075.30
SD	16547.11	88404.46
SEM	3021.07	16140.37
N	30	30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013, December]

Unpaired t-test for EV 2008 shows the following results

Enter Data: first row = 30 randomly selected Companies / second row = 30 randomly selected GPTW Companies

P value and statistical significance:

- The two-tailed P value equals 0.0548
- By conventional criteria, this difference is considered to be not quite statistically significant.

Confidence interval:

- The mean of Group One minus Group Two equals -37661.38620
- 95% confidence interval of this difference: From -76119.87741 to 797.10501

Intermediate values used in calculations:

- $t = 1.9602$
- $df = 58$
- standard error of difference = 19212.749

Data review:

Group	Group One	Group Two
Mean	14648.04713	52309.43333
SD	20432.88907	103229.78720
SEM	3730.51809	18847.09435
N	30	30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

Unpaired t-test for EV on total assets in % 2006 shows the following results

Enter Data: first row = 30 randomly selected Companies / second row = 30 randomly selected GPTW companies

P value and statistical significance:

- The two-tailed P value equals 0.1241
- By conventional criteria, this difference is considered to be not statistically significant.

Confidence interval:

- The mean of Group One minus Group Two equals -43.157
- 95% confidence interval of this difference: From -98.523 to 12.210

Intermediate values used in calculations:

- $t = 1.5603$
- $df = 58$
- standard error of difference = 27.660

Data review:

Group	Group One	Group Two
Mean	78.080	121.237
SD	95.847	117.324
SEM	17.499	21.420
N	30	30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

Unpaired t-test for EV on total assets in % 2008 shows the following results

Enter Data: first row = 30 randomly selected Companies / second row = 30 randomly selected GPTW Companies

P value and statistical significance:

- The two-tailed P value equals 0.1084
- By conventional criteria, this difference is considered to be not statistically significant.

Confidence interval:

- The mean of Group One minus Group Two equals -84.523
- 95% confidence interval of this difference: From -188.273 to 19.226

Intermediate values used in calculations:

- $t = 1.6308$
- $df = 58$
- standard error of difference = 51.830

Data review:

Group	Group One	Group Two
Mean	83.563	168.087
SD	109.292	262.004
SEM	19.954	47.835
N	30	30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

Unpaired t-test for EV on sales in % 2006 shows the following results

Enter Data: first row = 30 randomly selected Companies / second row = 30 randomly selected GPTW companies

P value and statistical significance:

- The two-tailed P value equals 0.1740
- By conventional criteria, this difference is considered to be not statistically significant.

Confidence interval:

- The mean of Group One minus Group Two equals -25.943
- 95% confidence interval of this difference: From -63.672 to 11.785

Intermediate values used in calculations:

- $t = 1.3764$
- $df = 58$
- standard error of difference = 18.848

Data review:

Group	Group One	Group Two
Mean	37.030	62.973
SD	67.941	77.727

SEM 12.404 14.191

N 30 30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

Unpaired t-test for EV on sales in % 2008 shows the following results

Enter Data: first row = 30 randomly selected Companies / second row = 30 randomly selected GPTW Companies

P value and statistical significance:

→ The two-tailed P value equals 0.0368

→ By conventional criteria, this difference is considered to be statistically significant.

Confidence interval:

→ The mean of Group One minus Group Two equals -47.220

→ 95% confidence interval of this difference: From -91.450 to -2.990

Intermediate values used in calculations:

→ $t = 2.1371$

→ $df = 58$

→ standard error of difference = 22.096

Data review:

Group	Group One	Group Two
Mean	24.957	72.177
SD	40.552	114.028
SEM	7.404	20.819
N	30	30

Source: <http://www.graphpad.com/quickcalcs/ttest1/> [2013]

Appendix 8: Input data for correlation analyses GPTW score - EV on total assets

	No.	calculated GPTW score 2009 declining	EV on total assets 2008	C. no.	EV on total assets 2008 declining		EV on total assets random selection	$\xi = x2 = 1000 \cdot x1$	£ random selection
1-10	1	159.3802	11	8	1,382.0		557.7	840.6198	842.082448
	2	157.917552	146.3	16	557.7		406.9	842.082448	843.545097
	3	156.454903	405.5	27	406.9		405.5	843.545097	845.007745
	4	154.992255	101	3	405.5		213	845.007745	846.470393
	5	153.529607	132.6	29	213.0		178.3	846.470393	847.933041
	6	152.066959	94.2	12	178.3		148.9	847.933041	849.39569
	7	150.60431	19.6	24	148.9		148.7	849.39569	850.85338
	8	149.141662	1,382.0 0	15	148.7		1382	850.858338	840.6198
	9	147.679014	103	2	146.3		146.3	852.320986	852.320986
	10	146.216366	54	22	145.9		145.9	853.783634	853.783634
11-20	11	144.753717	51.2	30	143.3		132.6	855.246283	856.708931
	12	143.291069	178.3	5	132.6		113.5	856.708931	858.171579
	13	141.828421	25	23	113.5		143.3	858.171579	861.096876
	14	140.365772	0	19	106.0		103	859.634228	861.096876
	15	138.903124	148.7	9	103.0		101	861.096876	862.559524
	16	137.440476	557.7	4	101.0		89.1	862.559524	865.484821
	17	135.977828	0	6	94.2		85.4	864.022172	866.947469
	18	134.515179	17.9	28	89.1		94.2	865.484821	864.022172
	19	133.052531	106	25	85.4		106	866.947469	859.634228
	20	131.589883	54.1	21	66.4		66.4	868.410117	868.410117
21-30	21	130.127234	66.4	20	54.1		42.1	869.872766	874.26071
	22	128.664586	145.9	10	54.0		54.1	871.335414	869.872766
	23	127.201938	113.5	11	51.2		51.2	872.798062	872.798062
	24	125.73929	148.9	26	42.1		54	874.26071	871.335414
	25	124.276641	85.4	13	25.0		17.9	875.723359	878.648655
	26	122.813993	42.1	7	19.6		25	877.186007	875.723359
	27	121.351345	406.9	18	17.9		11	878.648655	880.111303
	28	119.888697	89.1	1	11.0		19.6	880.111303	877.186007
	29	118.426048	213	14	0.0		0	881.573952	881.573952
	30	116.9634	143.3	17	0.0		0	883.0366	883.0366
				Ø	168			Ø	862.023055

Appendix 9: Input data for correlation analyses GPTW score – EV on sales

	No.	calculated GPTW score 2009 declining	EV on sales 2008	C. no.	EV on sales 2008 declining		EV on sales random selection	£ = x2 = 1000-x1	£ random selection
1-10	1	159.3802	11	8	551.6	5	158.7	840.6198	846.470393
	2	157.917552	146.3	5	312.1	3	197.4	842.082448	843.545097
	3	156.454903	405.5	4	197.4	2	312.1	843.545097	842.082448
	4	154.992255	101	29	158.7	1	73	845.007745	840.6198
	5	153.529607	132.6	10	110.6	6	551.6	846.470393	847.933041
	6	152.066959	94.2	23	101.4	7	110.6	847.933041	849.39569
	7	150.60431	19.6	26	95.7	9	101.4	849.39569	852.320986
	8	149.141662	1,382.00	25	75.5	10	67.4	850.858338	853.783634
	9	147.679014	103	24	73.0	4	95.7	852.320986	845.007745
	10	146.216366	54	21	67.4	8	75.5	853.783634	850.858338
11-20	11	144.753717	51.2	30	64.2	14	58.7	855.246283	859.634228
	12	143.291069	178.3	19	58.7	11	56.8	856.708931	855.246283
	13	141.828421	25	12	56.8	12	45	858.171579	856.708931
	14	140.365772	0	3	55.7	16	64.2	859.634228	862.559524
	15	138.903124	148.7	15	45.0	13	21.8	861.096876	858.171579
	16	137.440476	557.7	20	44.5	17	55.7	862.559524	864.022172
	17	135.977828	0	9	36.1	19	44.5	864.022172	866.947469
	18	134.515179	17.9	13	22.3	18	22.3	865.484821	865.484821
	19	133.052531	106	18	21.8	15	36.1	866.947469	861.096876
	20	131.589883	54.1	11	8.8	20	8.8	868.410117	868.410117
21-30	21	130.127234	66.4	1	4.3	21	4.3	869.872766	869.872766
	22	128.664586	145.9	7	3.7	24	0	871.335414	874.26071
	23	127.201938	113.5	2	0.0	22	0	872.798062	871.335414
	24	125.73929	148.9	6	0.0	23	3.7	874.26071	872.798062
	25	124.276641	85.4	14	0.0	25	0	875.723359	875.723359
	26	122.813993	42.1	16	0.0	26	0	877.186007	877.186007
	27	121.351345	406.9	17	0.0	27	0	878.648655	878.648655
	28	119.888697	89.1	22	0.0	28	0	880.111303	880.111303
	29	118.426048	213	27	0.0	29	0	881.573952	881.573952
	30	116.9634	143.3	28	0.0	30	0	883.0366	883.0366
				Ø	72			Ø	862.023055

Appendix 10: Correlation Analysis

Correlation Analysis: $x = 30$ GPTW / $y = EV$ on total assets

x = 30 GPTW scores declining / y = EV on total assets (random selection done by SPSS)

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	138.1718	168.0866667
Biased Variance	160.2722202	66357.94382
Biased Standard Deviation	12.65986652	252.6003568
Covariance	1816.513327	
Correlation	0.538443012	
Determination	0.289920877	
T-Test	3.381157398	
p-value (2 sided)	0.002144154	
p-value (1 sided)	0.001072077	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Correlation Analysis: $x = 30$ GPTW / $y = EV$ on sales

x = 30 GPTW scores declining / y = EV on sales (random selection done by SPSS)

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	138.1718	72.1766667
Biased Variance	160.2722202	12568.95912
Biased Standard Deviation	12.65986652	112.1113693
Covariance	971.6649898	
Correlation	0.661781336	
Determination	0.437954537	
T-Test	4.67097784	
p-value (2 sided)	6.82E-05	
p-value (1 sided)	3.41E-05	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Correlation Analysis: $x = 30$ GPTW / $y = \mathcal{E}$ - EV on total assets

x = 30 GPTW scores declining / y = \mathcal{E} (random selection done by SPSS) - EV on total assets

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	138.1718	862.0230545
Biased Variance	160.2722202	158.8116521
Biased Standard Deviation	12.65986652	12.60204952
Covariance	-160.5632799	
Correlation	-0.972865194	
Determination	0.946466685	
T-Test	-22.24946715	
p-value (2 sided)	2.43E-19	
p-value (1 sided)	1.22E-19	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Correlation Analysis: $x = 30$ GPTW / $y = \mathcal{E}$ - EV on sales

$x = 30$ GPTW scores declining / $y = \mathcal{E}$ (random selection done by SPSS) - EV on sales

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	138.1718	862.0230545
Biased Variance	160.2722202	160.2722202
Biased Standard Deviation	12.65986652	12.60204952
Covariance	-161.6677094	
Correlation	-0.975083428	
Determination	0.950787691	
T-Test	-23.25861866	
p-value (2 sided)	7.48E-20	
p-value (1 sided)	3.74E-20	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Correlation Analysis: $x = \mathcal{E}$ / $y = EV$ on total assets

$x = \mathcal{E}$ (random selection done by SPSS) / $y = EV$ on total assets (random selection done by SPSS)

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	862.0230545	168.0866667
Biased Variance	158.8116521	66357.94382
Biased Standard Deviation	12.60204952	257.6003568
Covariance	-2213.898775	
Correlation	-0.659245025	
Determination	0.434604003	
T-Test	-4.63926854	
p-value (2 sided)	7.43E-05	
p-value (1 sided)	3.72E-05	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Correlation Analysis: $x = \mathcal{E}$ / $y = EV$ on sales

$x = \mathcal{E}$ (random selection done by SPSS) / $y = EV$ on sales (random selection done by SPSS)

Pearson Product Correlation – Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	862.0230545	72.17666667
Biased Variance	158.8116521	12568.95912
Biased Standard Deviation	12.60204952	112.1113693
Covariance	-929.9492591	
Correlation	-0.633369597	
Determination	0.401157046	
T-Test	-4.330915958	
p-value (2 sided)	0.000172056	
p-value (1 sided)	8.60E-05	
Degrees of Freedom	28	
Number of Observations	30	

Source: http://www.wessa.net/rwasp_correlation.wasp#output

Appendix 11: Ranking GPTW results 2007/2009

Company	C1	C1	C2	C2	C3	C4	C4	C5	C5	C6	C6	C7 Hawle	C7 Hawle	C8	C9	C10	C11							
V1	97	97	0	94	100	6	88	99	100	1	99	99	0	98	96	-2	90	85	-5	92	97	89	94	
V2	91	91	0	94	98	4	84	98	98	0	100	93	-7	89	82	-7	95	91	-4	93	93	97	93	
V3	95	95	0	100	97	-3	90	98	98	0	97	98	1	98	95	-3	94	97	3	96	98	100	95	
V4	82	86	4	87	95	8	70	95	95	0	88	98	10	88	91	3	67	71	4	74	86	79	79	
V5	96	95	-1	89	100	11	95	97	98	1	99	100	1	95	95	0	82	82	0	85	95	84	74	
V6	92	92	0	87	100	13	69	93	98	5	99	99	0	94	92	-2	75	73	-2	78	87	60	76	
V7	69	67	-2	85	92	7	60	89	90	1	91	97	6	84	72	-12	77	77	0	79	79	71	84	
V8	91	84	-7	91	98	7	70	95	94	-1	96	98	2	89	82	-7	75	74	-1	75	85	84	82	
V9	78	77	-1	91	97	6	49	82	93	11	93	93	0	64	71	7	62	77	15	84	84	84	84	
V10	79	84	5	83	90	7	67	93	92	-1	88	91	3	88	86	-2	71	73	2	70	80	71	76	
V11	68	59	-9	72	83	11	72	92	93	1	85	88	3	68	68	0	66	61	-5	78	87	79	73	
V12	77	88	11	91	97	6	93	93	96	3	88	91	3	83	88	5	81	88	7	94	93	88	79	
V13	92	95	3	93	100	7	92	98	98	0	97	100	3	96	92	-4	81	87	6	92	97	91	85	
V14	90	83	-7	85	93	8	75	89	96	7	97	99	2	94	86	-8	77	64	-13	72	90	76	85	
V15	83	89	6	91	100	9	80	97	98	1	93	100	7	90	91	1	72	73	1	86	93	74	76	
V16	85	82	-3	83	98	15	72	95	94	-1	93	94	1	89	81	-8	66	69	3	70	82	78	75	
V17	77	85	8	87	98	11	83	95	96	1	90	97	7	79	80	1	88	84	-4	91	94	72	87	
V18	45	40	-5	68	87	19	90	95	98	3	68	92	4	58	48	-10	61	61	0	68	73	93	54	
V19	66	62	-4	83	95	12	57	89	95	6	91	95	4	89	79	-10	56	57	1	72	78	71	89	
V20	75	76	1	72	95	23	55	95	90	-5	94	99	5	76	68	-8	75	69	-6	80	84	74	89	
V21	92	94	2	94	100	6	84	98	98	0	97	99	2	95	93	-2	88	82	-6	86	95	86	75	
V22	62	74	12	81	93	12	52	90	93	3	78	88	10	74	73	-1	60	66	6	68	75	69	60	
V23	77	81	4	80	90	10	66	94	92	-2	88	94	6	79	83	4	66	65	-1	70	79	81	68	
V24	66	69	3	85	95	10	77	91	93	2	88	95	7	66	67	1	84	78	-6	89	86	70	77	
V25	58	60	2	89	88	-1	58	84	85	1	94	96	2	76	68	-8	76	73	-3	69	80	62	80	
V26	87	93	6	89	100	11	91	96	98	2	91	97	6	94	90	-4	72	76	4	88	94	86	59	
V27	64	87	23	87	97	10	71	95	97	2	91	98	7	76	85	9	63	71	8	78	84	81	81	
V28	96	99	3	98	100	2	89	98	100	2	100	98	-2	94	93	-1	86	90	4	91	97	93	92	
V29	83	76	-7	76	92	16	51	86	89	2	94	95	1	70	70	0	50	55	5	53	67	63	50	
V30	92	88	-4	91	98	7	79	95	98	3	93	99	6	87	85	-2	84	73	-11	85	93	79	76	
V31	79	88	9	94	98	4	86	97	98	1	93	97	4	88	85	-3	83	81	-2	86	92	88	81	
V32	81	81	0	81	97	16	72	95	90	-5	96	94	-2	84	76	-8	74	67	-7	73	80	74	79	
V33	100	100	0	98	100	2	97	99	100	1	100	100	0	98	96	-2	93	94	1	99	100	98	97	
V34	93	91	-2	81	97	16	84	93	99	6	91	98	7	87	93	6	74	74	0	86	91	79	89	
V35	81	77	-4	74	98	24	55	93	94	1	97	99	2	90	77	-13	71	65	-6	69	80	69	82	
V36	78	63	-15	87	97	10	76	85	88	3	87	89	2	85	89	4	93	82	-11	80	77	93	89	
V37	95	93	-2	91	100	9	97	98	100	2	93	100	7	96	93	-3	91	95	4	95	99	98	97	
V38	85	83	-2	89	100	11	85	97	98	1	88	98	10	94	84	-10	91	84	-7	94	96	76	83	
V39	80	88	8	79	98	19	70	95	96	1	91	98	7	84	87	3	73	70	-3	81	89	71	86	
V40	73	80	7	79	98	19	73	99	99	0	99	100	1	92	97	5	95	97	2	74	89	95	92	
V41	82	94	12	89	98	9	80	99	98	-1	99	98	-1	84	85	1	76	86	10	83	89	93	82	
V42	90	85	-5	87	98	11	74	94	96	2	99	99	0	92	89	-3	58	64	6	77	83	65	74	
V43	42	68	26	76	97	21	41	90	95	5	84	90	6	49	58	9	67	68	1	74	86	55	83	
V44	98	99	1	91	100	9	97	100	100	0	96	100	4	100	96	-4	94	98	4	96	100	100	97	
V45	91	85	-6	87	98	11	71	97	93	-4	97	99	2	84	77	-7	86	74	-12	75	85	83	85	
V46	90	87	-3	85	98	13	74	93	97	4	96	98	2	86	83	-3	76	71	-5	79	84	82	82	
V47	13	25	12	34	60	26	80	86	93	7	51	71	20	19	24	5	65	75	10	86	54	97	88	
V48	81	80	-1	74	98	24	68	95	98	3	93	98	5	77	82	5	72	65	-7	80	86	57	85	
V49	78	93	15	91	98	7	89	99	98	-1	97	99	2	95	91	-4	83	76	-7	88	92	88	89	
V50	76	74	-2	89	97	8	66	93	95	2	90	97	7	74	81	7	67	77	10	69	84	71	78	
V51	65	72	7	79	95	16	89	97	97	0	87	98	11	68	69	1	89	81	-8	94	93	79	87	
V52	88	92	4	85	97	12	91	97	99	2	94	98	4	89	87	-2	84	86	2	91	94	91	90	
V53	73	82	9	93	100	7	78	94	99	5	82	88	6	73	81	8	80	85	5	83	88	77	81	
V54	80	79	-1	83	97	14	89	93	92	-1	84	94	10	84	82	-2	81	84	3	90	92	83	81	
V55	94	96	2	100	100	0	91	99	99	0	96	99	3	95	93	-2	83	88	5	97	97	93	93	
V56	84	91	7	89	98	9	81	94	98	4	94	98	4	85	86	1	87	78	-9	88	93	82	87	
V57	96	99	3	96	100	4	93	100	100	0	96	100	4	93	94	1	95	97	2	99	99	100	98	
V58	88	89	1	91	98	7	85	96	98	2	97	99	2	79	83	4	89	88	-1	93	95	86	92	
V59	27	68	41	45	90	45	66	95	96	1	55	61	6	35	42	7	74	79	5	92	61	91	97	
V61	0	81	81	0	98	98	76	0	98	98	0	97	97	0	82	82	0	85	85	82	92	80	91	
totals core after z-correction_2007	135,5		133,1		165,9		130,6		152,3		112,1													
Ranking totals core after z-correction_2007	3		4		1		5		2		6													
Ranking totals core after z-correction_2009	130,7		152,8		129,3		150,5		132,1		121,4		134,7		138,8		122,2		126,7					
Ranking	7		2		8		3		6		11		5		4		10		9					

Source: Brenninger H.-J., Benchmarkreport results 2007 / 2009 Great Place to Work®

Appendix 12: Detailed data analysis of the results GPTW contest 2007/2009

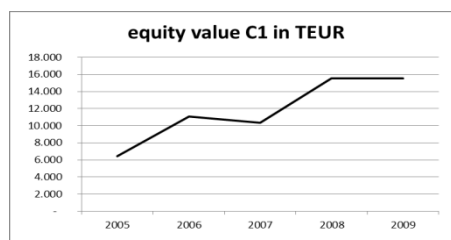
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
1	7	135.48	130.68	- 4.8
Most relevant decrease or raise in the following questions:				
Question 29:	Promotions go to those who best deserve them (minus 7 points)			
Question 36:	Our facilities contribute to a good working environment (minus 14 points)			
Question 45:	Management is competent at running the business (minus 6 points)			
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
2	2	133.07	152.80	+ 19.73
Most relevant decrease or raise in the following questions:				
Question 16:	Management genuinely seeks and responds to suggestion and ideas (plus 15 points)			
Question 18:	I feel I receive a fair share of the profits made by this organization (plus 19 points)			
Question 20:	Management has a clear view of where the organization is going and how to get there (plus 23 points)			
Question 29:	Promotions go to those who best deserve them (plus 15 points)			
Question 32:	Management delivers on its promises (plus 16 points)			
Question 34:	People care about each other there (plus 16 points)			
Question 35:	Management actions match its words (plus 24 points)			
Question 39:	There is a "family" or "team" feeling there (plus 20 points)			
Question 40:	People celebrate special events around here (plus 20 points)			
Question 47:	We have special and unique benefits here (plus 26 points)			
Question 48:	We are all in this together (plus 24 points)			
Question 51:	I want to work here for a long time (plus 16 points)			
Question 59:	People are supported by helpful measures in promotion health (plus 45 points)			
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
3	8	(no participation)	129.27	--
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
4	1	165.92	159.38	-6.54
Most relevant decrease or raise in the following questions:				
Question 20:	Management has a clear view of where the organization is going and how to get there (minus 6 points)			
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
5	3	130.65	150.48	+ 19.83
Most relevant decrease or raise in the following questions:				
Question 18:	I feel I receive a fair share of the profits made by this organization (plus 24 points)			
Question 47:	We have special and unique benefits here (plus 20 points)			
Company	Place in Ranking 2009	Score in 2007	Score in 2009	Difference
6	6	152.35	132.08	- 20.27
Most relevant decrease or raise in the following questions:				
Question 2:	I am given the resources and equipment to do my job (minus 6 points)			
Question 7:	Management makes its expectations clear (minus 12 points)			
Question 8:	I can ask management any reasonable questions and get a straight answer (minus 7 points)			
Question 14:	Management is approachable, easy to talk with (minus 8 points)			
Question 16:	Management genuinely seeks and responds to suggestions and ideas (minus 8 points)			
Question 18:	I feel I receive a fair share of the profits made by this organization (minus 11 points)			

Question 19:	Management keeps me informed about important issues and changes (minus 10 points)			
Question 20:	Management has a clear view of where the organization is going and how to get there (minus 8 points)			
Question 25:	Management does a good job of assigning and coordinating people (minus 8 points)			
Question 32:	Management delivers on its promises (minus 8 points)			
Question 35:	Management's actions match its words (minus 13 points)			
Question 38:	I'm proud to tell other I work here (minus 10 points)			
Question 45:	Management is competent at running the business (minus 7 points)			
Company	Place in Ranking	Score in 2007	Score in 2009	Difference
7	11	112.11	152.80	+ 40.69
Most relevant decrease or raise in the following questions:				
Question 9:	I am offered training or development to further myself professionally (plus 15 points)			
Question 12:	My work has special meaning: this is not "just a job" (plus 7 points)			
Question 27:	This is a psychologically and emotionally healthy place to work (plus 8 points)			
Question 41:	I believe management would lay people off only as a last resort (plus 11 points)			
Question 47:	We have special and unique benefits here (plus 10 points)			
Question 50:	Management shows a sincere interest in me as a person, not just an employee (plus 9 points)			
Company	Place in Ranking	Score in 2007	Score in 2009	Difference
8	5	(no participation)	134.74	--
Company	Place in Ranking	Score in 2007	Score in 2009	Difference
9	4	(no participation)	138.81	--
Company	Place in Ranking	Score in 2007	Score in 2009	Difference
10	10	(no participation)	122.17	--
Company	Place in Ranking	Score in 2007	Score in 2009	Difference
11	9	(no participation)	126.74	--

Source: GPTW Institute

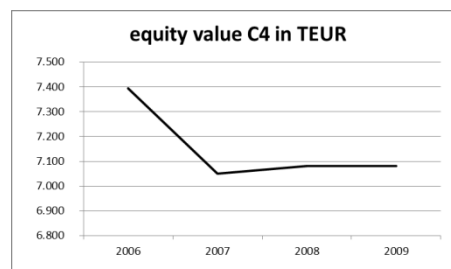
Appendix 13: Detailed computation of EBIT and EV of exemplarily selected GPTW companies

C1					
EBIT-Multiplier					
in TEUR					
	2005	2006	2007	2008	
EBIT	834	1.436	1.311	2.140	
x Multiplier	5,9	5,9	5,9	5,9	
= company value	4.921	8.475	7.737	12.626	
- bank debts	3	-	-	-	
- additional interest bearing debts (e.g. mezzanine)	2	1	0	2	
+ cash resources (fixed deposits, cash, etc.)	1.544	2.617	2.599	2.883	
= purchase price / equity value	6.460	11.091	10.336	15.507	

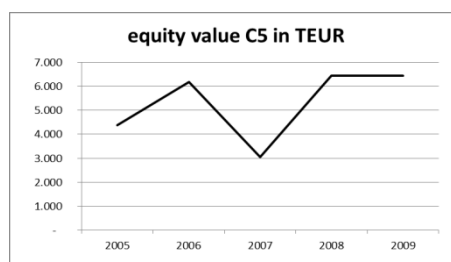


C3					
EBIT-Multiplier					
in TEUR					
	2005	2006	2007	2008	2009
EBIT	k.A.	939	615	1.031	
x Multiplier			5,9		
= company value			3.628		
- bank debts			-		
- addition interest bearing debst (e.g. mezz)			30		
+ cash resources (fixed deposits, cash ...)			1.651		
= purchase price / equity value			5.249		

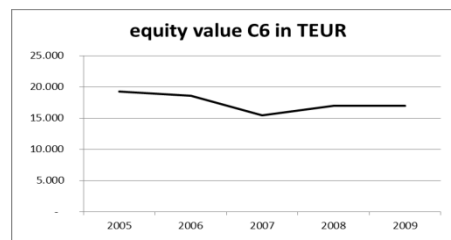
C4					
EBIT-Multiplier					
in TEUR					
	2005	2006	2007	2008	
EBIT	k.A.	1.024	1.119	1.091	
x Multiplier		5,9	5,9	5,9	
= company value		6.042	6.604	6.438	
- bank debts		-	-	-	
- additional interest bearing debts (e.g. mezzanine)		3	0	0	
+ cash resources (fixed deposits, cash, etc.)		1.350	446	642	
= purchase price / equity value		7.395	7.051	7.080	



C5					
EBIT-Multiplier					
in TEUR					
	2005	2006	2007	2008	
EBIT	624	943	362	1.091	
x Multiplier	5,9	5,9	5,9	5,9	
= company value	3.680	5.564	2.136	6.436	
- bank debts	-	2	-	-	
- additional interest bearing debts (e.g. mezzanine)	2	-	-	0	
+ cash resources (fixed deposits, cash, etc.)	712	611	906	3	
= purchase price / equity value	4.390	6.173	3.041	6.438	

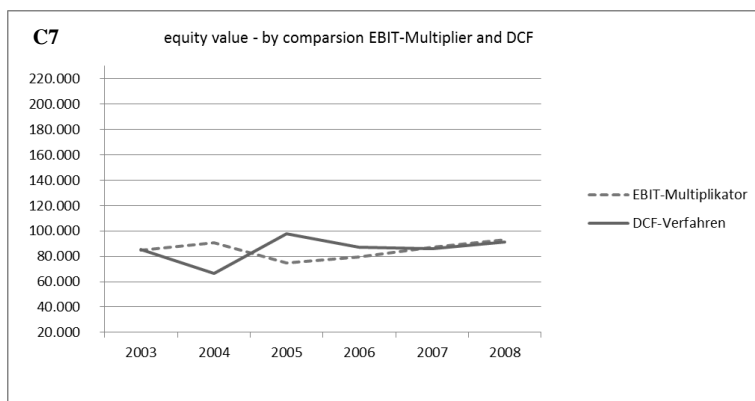


C6					
EBIT-Multiplier					
in TEUR					
	2005	2006	2007	2008	
EBIT	2.594	2.422	1.324	2.178	
x Multiplier	5,9	5,9	5,9	5,9	
= company value	15.302	14.288	7.810	12.851	
- bank debts	-	-	-	-	
- additional interest bearing debts (e.g. mezzanine)	220	220	305	211	
+ cash resources (fixed deposits, cash, etc.)	4.178	4.547	7.988	4.396	
= purchase price / equity value	19.260	18.615	15.494	17.036	

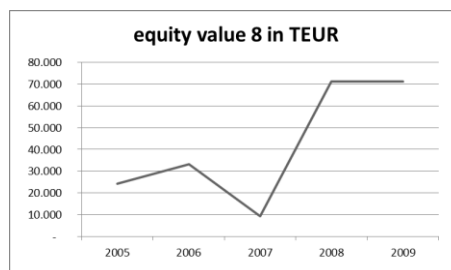


C7

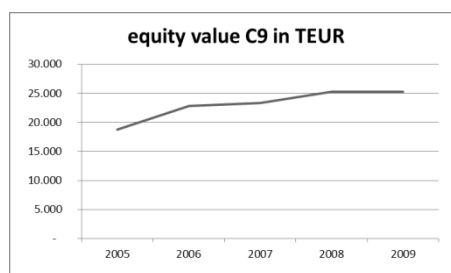
EBIT-Multiplikator						
in TEUR						
	2003	2004	2005	2006	2007	2008
EBIT	11.437	14.823	14.470	14.801	15.439	15.611
x Multiplier	5,9	5,9	5,9	5,9	5,9	5,9
= company value	75.484	87.456	85.373	87.326	91.090	92.105
- bank debts	- 302	- 259	- 18.000	- 13.077	- 9.935	- 4.427
- addition interest bearing debst (e.g. mezzan...)	- 6	- 6	- 369	- 397	- 415	- 251
+ cash resources (fixed deposits, cash ...)	9.691	3.460	7.737	5.660	6.357	5.469
= purchase price / equity value	84.867	90.651	74.741	79.512	87.097	92.896
equity value - DCF-method						
in TEUR	85.218	66.649	98.070	87.058	85.780	91.352



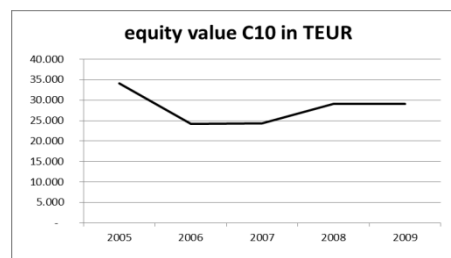
EBIT-Multiplier				
in TEUR				
	2005	2006	2007	2008
EBIT	7.719	7.926	5.128	14.242
x Multiplier	5,9	5,9	5,9	5,9
= company value	45.542	46.765	30.255	84.030
- bank debts	- 20.128	- 17.925	- 20.234	- 17.925
- addition interest bearing debst (e.g. mezz...)	- 1.100	- 1.104	- 1.018	- 1.092
+ cash resources (fixed deposits, cash ...)	1	5.342	190	6.190
= purchase price / equity value	24.315	33.079	9.192	71.204



EBIT-Multiplier				
in TEUR				
	2005	2006	2007	2008
EBIT	2.680	3.374	3.561	3.944
x Multiplier	5,9	5,9	5,9	5,9
= company value	15.812	19.904	21.010	23.271
- bank debts	-	-	-	-
- addition interest bearing debst (e.g. mezz...)	- 15	- 33	- 0	- 16
+ cash resources (fixed deposits, cash ...)	2.931	2.978	2.309	2.007
= purchase price / equity value	18.728	22.848	23.319	25.262



EBIT-Multiplier				
in TEUR				
	2005	2006	2007	2008
EBIT	3.390	1.866	1.798	2.415
x Multiplier	5,9	5,9	5,9	5,9
= company value	19.998	11.011	10.609	14.251
- bank debts	-	-	-	-
- additional interest bearing debts (e.g. mezzanine)	- 0	- 49	- 1	- 0
+ cash resources (fixed deposits, cash, etc.)	14.173	13.237	13.795	14.852
= purchase price / equity value	34.171	24.199	24.404	29.103



Appendix 14: Ranking EBIT and EV

Rank EBIT	
-15.495,0	10
-12.038,8	9
-8.582,6	8
-6.854,5	7,5
-5.126,3	7
-3.398,2	6,5
-1.670,1	6
58,0	5,5
1.786,1	5
3.514,2	4,5
5.242,3	4
8.698,5	3
12.154,8	2
15.611,0	1

Rank EV	
15,0	10
5.782,2	9,5
11.549,3	9
17.316,5	8,5
23.083,7	8
28.850,8	7,5
34.618,0	7
40.385,2	6,5
46.152,3	6
51.919,5	5,5
57.686,7	5
63.453,8	4,5
69.221,0	4
80.755,3	3
92.289,7	2
103.824,0	1

Source: Elektronischer Bundesanzeiger

Appendix 15: Company classification with type and ranking

Company Type	Original-data				Ranks			
	EBIT 2006	EBIT 2008	EV 2006	EV 2008	EBIT 2006	EBIT 2008	EV 2006	EV 2008
1	-15.495,0	-3.016,0	0,0	0,0	10	6	0	0
1	195,0	61,0	0,0	0,0	5	5	0	0
1	-396,0	130,0	0,0	0,0	6	5	0	0
1	508,0	466,0	0,0	0,0	5	5	0	0
1	885,0	1.145,0	0,0	0,0	5	5	0	0
1	407,0	520,0	129,0	0,0	5	5	10	0
1	737,0	410,0	1.675,0	0,0	5	5	10	0
1	858,0	338,0	4.423,0	15,0	5	5	10	10
1	303,0	126,0	1.968,0	661,0	5	5	10	10
1	293,0	347,0	0,0	1.099,0	5	5	0	10
1	614,0	450,0	2.729,0	2.433,0	5	5	10	10
1	511,0	691,0	3.305,0	4.414,0	5	5	10	10
1	823,0	1.058,0	1.103,0	5.370,0	5	5	10	10
1	623,0	639,0	5.327,0	5.438,0	5	5	10	10
1	624,0	639,0	5.334,0	5.438,0	5	5	10	10
1	1.382,0	1.220,0	8.260,0	5.501,0	5	5	9	10
1	-272,0	1.223,0	0,0	5.587,0	5	5	0	10
1	791,0	1.306,0	3.704,0	5.901,0	5	5	10	9
1	3.803,0	3.694,0	20.289,0	8.784,0	4	4	8	9
1	1.912,0	2.212,0	11.622,0	11.425,0	5	5	9	9
1	2.090,0	1.068,0	18.130,0	12.182,0	5	5	8	9
1	3.452,0	2.183,0	24.101,0	15.189,0	5	5	8	9
1	6.046,0	3.310,0	44.628,0	23.322,0	4	5	6	8
1	4.434,0	1.851,0	41.510,0	27.391,0	4	5	6	8
1	4.138,0	3.895,0	25.013,0	28.292,0	4	4	8	8
1	3.678,0	6.340,0	27.180,0	43.299,0	4	4	8	6
1	4.928,0	6.611,0	34.992,0	45.974,0	4	4	7	6
1	7.902,0	10.066,0	42.353,0	53.810,0	3	3	6	5
1	2.415,0	7.930,0	25.208,0	62.146,0	5	3	8	5
1	6.965,0	9.917,0	56.074,0	70.180,0	4	3	5	4
2	0,0	0,0	0,0	0,0	0	0	0	0
2	0,0	0,0	0,0	0,0	0	0	0	0
2	0,0	0,0	0,0	0,0	0	0	0	0
2	943,0	1.091,0	6.173,0	6.438,0	5	5	9	9
2	1.024,0	1.091,0	7.395,0	7.080,0	5	5	9	9
2	1.436,0	2.140,0	11.091,0	15.507,0	5	5	9	9
2	2.422,0	2.178,0	18.615,0	17.036,0	5	5	8	9
2	3.374,0	3.944,0	22.848,0	28.023,0	5	4	8	7
2	1.866,0	2.415,0	24.199,0	29.103,0	5	5	8	7
2	7.926,0	14.242,0	33.079,0	71.204,0	3	6	7	4
2	14.801,0	15.611,0	89.873,0	103.824,0	1	10	2	1

Source: Great Place to Work[®], Elektronischer Bundesanzeiger, www.finance-magazin.com

Appendix 16: Mann-Whitney-Tests

Mann-Whitney- Test EBIT 2006 done by SPSS

Ranks

Company-Type		N	Middle Rank	Ranksum
EBIT_2006	RC	30	19,88	596,50
	GPTW	8	18,06	144,50
	Complete	38		

Statistics for Test^a

	EBIT_2006
Mann-Whitney-U	108,500
Wilcoxon-W	144,500
Z	-,502
Asymptotic Significance (2-side)	,616
Exakt Significance [2*(1-side Sig.)]	,686 ^b

All cases ~ = 0 included

a. Groupvariable: Company-Type, b. Not corrected for combinations, Source: Elektronischer Bundesanzeiger

Mann-Whitney- Test EBIT 2008 done by SPSS

Ranks

Company-Type		N	Middle Rank	Ranksum
EBIT_2008	RC	30	18,35	550,50
	GPTW	8	23,81	190,50
	Complete	38		

Statistics for Test^a

	EBIT_2008
Mann-Whitney-U	85,500
Wilcoxon-W	550,500
Z	-1,546
Asymptotic Significance (2-side)	,122
Exakt Significance [2*(1-side Sig.)]	,221 ^b

All cases ~ = 0 included

a. Groupvariable: Company-Type, b. Not corrected for combinations, Source: Elektronischer Bundesanzeiger

Mann-Whitney- Test EV 2006 done by SPSS

Ranks

Company-Type		N	Middle Rank
EV_2006	RC	23	17,20
	GPTW	8	12,56
	Complete	31	

Statistics for Test^a

	EV_2006
Mann-Whitney-U	64,500
Wilcoxon-W	100,500
Z	-1,282
Asymptotic Significance (2-side)	,200
Exakt Significance [2*(1-side Sig.)]	,219 ^b

All cases ~ = 0 included

a. Groupvariable: Company-Type, b. Not corrected for combinations, Source: Elektronischer Bundesanzeiger

Mann-Whitney- Test EV 2008 done by SPSS

Ranks

Company-Type		Company-Type		N
EV_2006	EV_2008	RC	23	17,72
		GPTW	8	11,06
		Complete	31	

Statistics for Test^a

	EV_2008
Mann-Whitney-U	52,500
Wilcoxon-W	88,500
Z	-1,838
Asymptotic Significance (2-side)	,066
Exakt Significance [2*(1-side Sig.)]	,074b

All cases ~ = 0 included

a. Groupvariable: Company-Type, b. not corrected for combinations

Source: Elektronischer Bundesanzeiger

Appendix 17: T-Tests

T-Test EBIT 2006 done by SPSS

Group-Statistics					
	Company-Type	N	Mean-Value	Standard-Deviation	Standardfailure of mean
EBIT_2006	RC	30	4,90	1,125	,205
	GPTW	8	4,25	1,488	,526

Test of independent samples										
		Levene-Test of Variance-Equality		T-Test for Mean-Equality						
		F	Significance	T	df	Sig. (2-side)	Middle Difference	Standardmistake of difference	95% Konfidenzintervall of Difference	
									lower	upper
EBIT_2006	Variations are equal	2,297	,138	1,357	36	,183	,650	,479	-,322	1,622
	Variations are unequal			1,151	9,244	,279	,650	,565	-,622	1,922

RC = randomly selected companies
GPTW = Companies attending "Great Place to Work Contest"

Source: Elektronischer Bundesanzeiger

T-Test EBIT 2008 done by SPSS

Group-Statistics					
	Company-Type	N	Mean-Value	Standard-Deviation	Standardfailure of mean
EBIT_2008	RC	30	4,70	,702	,128
	GPTW	8	5,63	1,847	,653

Test of independent samples										
		Levene-Test of Variance-Equality		T-Test for Mean-Equality						
		F	Significance	T	df	Sig. (2-side)	Middle Difference	Standardmistake of difference	95% Konfidenzintervall of Difference	
									lower	upper
EBIT_2008	Variations are equal	5,346	,027	-2,257	36	,030	-,925	,410	-1,756	-,094
	Variations are unequal			-1,390	7,547	,204	-,925	,665	-2,476	,626

RC = randomly selected companies
GPTW = Companies attending "Great Place to Work Contest"

Source: Elektronischer Bundesanzeiger

T-Test equity value 2006 done by SPSS

Group-Statistics					
	Company-Type	N	Mean-Value	Standard-Deviation	Standardfailure of mean
EV_2006	RC	23	2,48	1,620	,338
	GPTW	8	3,50	2,330	,824

Test of independent samples										
		Levene-Test of Variance-Equality		T-Test for Mean-Equality						
		F	Significance	T	df	Sig. (2-side)	Middle Difference	Standardmistake of difference	95% Konfidenzintervall of Difference	
									lower	upper
EV_2006	Variances are equal	,086	,772	-1,370	29	,181	-1,022	,746	-2,547	,504
	Variances are unequal			-1,148	9,467	,279	-1,022	,890	-3,021	,977
Alle cases ~ = 0 included										
RC = randomly selected companies										
GPTW = Companies attending "Great Place to Work Contest"										

Source: Elektronischer Bundesanzeiger

T-Test equity value 2008 done by SPSS

Group-Statistics				
Company-Type	N	Mean-Value	Standard-Deviation	Standardfailure of mean
EV_2008	RC	23	8,48	1,928
	GPTW	8	6,88	2,949

Test of independent samples										
		Levene-Test of Variance-Equality		T-Test for Mean-Equality						
		F	Significance	T	df	Sig. (2-side)	Middle Difference	Standardmistake of difference	95% Konfidenzintervall of Difference	
									lower	upper
EV_2008	Variances are equal	1,425	,242	1,761	29	,089	1,603	,910	-,258	3,465
	Variances are unequal			1,435	9,171	,185	1,603	1,117	-,917	4,124
Alle cases ~ = 0 included										
RC = randomly selected companies										
GPTW = Companies attending "Great Place to Work Contest"										

Source: Elektronischer Bundesanzeiger