About the author

After studying European Business Administration at the Euro-FH, Roland Rehn graduated with a Master of Business Administration with focus on change management and leadership from the University of Kempten in 2012. Meanwhile he works as a deputy head Board of Management Services and deputy Depot-A-Manager at Kreissparkasse Heidenheim.
### Agenda

1. Introduction
2. Participants
3. Hypothesis
4. Results of the study
5. Summary
6. Further research
The empirical material will be presented to explore the influence of change controlling usage and the correlation to project success. Data analysis is undertaken in three stages. First, the data are examined in SPSS. Second, measurement scales were refined for the key constructs of success, change controlling attributes, and market description. Third, the participants of the survey are analysed. Finally, subsequent analyses were conducted to examine the hypothesized relationships between the constructs. Because of the complexity and importance of the research problem a two-stage study will be performed, involving a combination of qualitative and quantitative methods and two data sets. In the first stage an explorative preliminary study will be performed. The second stage involves an empirical study. The literature review has been performed for a better understanding of the main elements of change management and change controlling. Based on this knowledge an explorative preliminary study was conducted in July 2012. The preliminary study consisted of personal interviews. The interviews were structured around open-ended questions about theoretical frameworks, analysis dimensions and measures. Semi-structured interviews were chosen as the primary research method because the intention was that participants should be able to freely express their own ideas within a general framework of an inquiry set by the researcher. To sum up, the data examination outlines that the present data fulfil the necessary prerequisites for the following statistical tests with SPSS.
The target group of the study consists of change experts of the GPM and Sparkassen Finance Group. The time frame of the study was 90 days. In total 278 participants from fifteen different industries took part in the study. Most participants were represented in the industries management consulting, banking and automotive industries. The companies differ also in size, according to the number of employees, whereas it is possible to distinguish in the analysis in accordance to this criterion. The significance of the study results was tested with diverse statistical tests, computed in SPSS.

Fifteen different sectors were defined. A large number of companies operate in the management consulting sector (24.82 %), followed by the bank sector with 16.55 %. The third highest value is from the automotive sector (9 %). This figure is closely followed by participant companies from electronics, high-tech, IT, software sector (8.3 %). Companies belonging to sectors such as public administration (1.4 %) and media (0.7 %) were represented by low percentages. Although some industry sectors provided more responses than others, all of the questionnaires were analysed since the study intended to find out as much as possible about how change controlling is being used in as many companies as available.
In accordance with the market situation of the individual companies, six different categories have been defined, heavy pressure on prices, high quality requirements, high ecological awareness, strong competition for innovation, strong competition, and high time pressure. Categories like heavy pressure on prices (71.2%), high quality requirements (84.9%) and high time pressure (71.6%) are strongly represented. In contrast the category high ecological awareness (47.8%) reached the lowest representation. It is expected that the market situation has an influence to the usage of change controlling. This is based on the assumption that a highly competitive market environment necessitates the usage of change controlling because the management has to align the company to market pressure.
According to the company size the companies can be divided into three categories. The first category, small companies, consists of those which have up to 50 employees (16.9%), the second category, medium companies, comprises those employing up to 500 people (25.2%), and the third category, large companies, includes those companies with 501 and more employees (57.9%). It is expected that the company size influence the change controlling usage, due to the different extent of resources available to build up a PMS and the necessity to manage complexity in change according to company structure.
In terms of the markets handled by the company, four different categories have been defined, specifically Germany, Europe, America, Asia, and worldwide.
The total of 278 responses consisted of 111 respondents (39.9%) who held senior management position, including CEOs, directors, head of main departments, and head of finance and controlling departments. In addition 80 respondents are in a project manager position (28.8%). These positions are directly followed by consultants (15.8%) and controller (7.9%). The positions of the respondents in the companies supported the validity of their responses in assessing the variables covered in this study with respect to change controlling usage.
For the next screening question, participants indicated the number of years they have with project experience. This question was mandatory, so respondents could not proceed to the next question without answering. There is a wide range of experience, with most falling within more than seven years of experience (64.7%). The second highest group consist of 57 respondents (20.5%) with four to six years of experience. These values are followed by the third group with one to three years of experience (14%). The last group with less than one year experience is represented by low percentages (0.7%).
The second set of questions related to the nature of change projects within the company. In addition to the change experience the kind of change projects has to be indicated. It was asked approximately on how many change projects they participated and the type of change projects they did. The options for type of change project were organizational structure, organizational processes, organizational strategy, and organizational culture. A large number of participants have change experience in the area of organizational structure (94.96%) and organizational processes (94.6%). These figures are closely followed by participants who have experience in the area of organizational strategy (80.2%) and fewer participants with experience in organizational culture (60.79%). In the area of organizational processes (37.4%) and organizational structure (22.3%) have the most participants more than five times change project experience.

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**Change management is necessary in various industries due to different causes**

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In sum, the present thesis contributes to the current literature in two ways. First, it explores if change controlling is positively correlated with the success of a change management project which is a new field of research in recent literature. Second, it investigates which characteristics of change controlling contribute to the success.

9. Change controlling – Hypothesis

- $H_1$: “Companies that use change controlling will have more successful change projects than those that do not use change controlling.”

- $H_2$: “The usage of change controlling becomes successful if the company considers three criteria: (1) define objectives clearly, (2) accompany the change controlling procedure particularly in a communicative way in order to make the resulting measures as well as their progress transparent, (3) subordinate the goals of change into smaller packages.”

- $H_3$: “Change controlling detects undesired developments during a change process.”
Based on the results of an explorative preliminary study with change management experts the hypothesis was established that the use of change controlling has a positive effect on a change project. The main part of the questionnaire asked the participants if their company uses change controlling. From a total of 278 respondents who replied to questioning regarding the application of change controlling within their company, 181 respondents (65.1%) stated that they use change controlling. A cross tabulation of industry sector with the usage of change controlling was conducted. The industry with the highest share of companies which use change controlling is the food and consumer goods (85.7%). This ratio is directly followed by the metal industry and mechanical engineering (78.9%) as well as the automotive industry (76%).
The findings are broken down into three subsections according to the three research hypotheses. The first aim of the empirical investigation was to identify whether the change controlling is positively associated with the success of a change project (H₁). The Table shows the current usage of PMS among respondents. A ranking of the usage of performance measurement systems was conducted by computing the means for the user group of change controlling. The ranking outlines that project controlling, benchmarking, audit and the balanced scorecard are the most frequently used PMS among the companies with change controlling.
Furthermore a ranking of the used KPIs in change projects is conducted by computing the means of the user group. The ranking shows that classic KPIs such as cost efficiency, financial indicators, progress report, sales data, and operation data are the ones which are used most frequently. Qualitative KPIs such as employee survey, customer satisfaction or qualitative descriptions of the situation are used less often by the respondents. The table above outlines the results of the ranking.

However, it should be noted that some KPIs are quantitative where as other are qualitative in nature. Combining them through factor analysis would not serve any purpose. However, the results show that most of the KPIs are not only interrelated but logically interconnected. For example, a qualitative description (KPI8) cannot be achieved unless a progress schedule (KPI6) is not in place. Similarly, cost efficiency (KPI2) cannot be calculated without sales data (KPI1). In other words, these KPIs are inseparable and should not be looked at in isolation. Instead, these KPIs should be seen as various aspects of the same change management performance measurement model.
In order to compare the means between users and non-users of change controlling, a t-test is carried out. Results of the t-test are shown in the table. It can be observed that respondents who use change controlling generally tend to agree on the positive influence of change controlling on the success of a change management project. Therefore H1 is supported. It should be noted that the results of the t-test may have limitations due to unequal samples since 181 participants were users and 97 non-users of change controlling.

The ranking of the various success items are obtained by computing the means offer the groups of users and non-users. It is evident that all respondents are conscious about the fact that change controlling helps to achieve certain goals and complete the project covering its entire scope. But there are noticeable differences between the mean values of the two groups. The mean of the two first-ranked items of the non-users is approximately .30 points lower than the mean of the user group. Together, both groups seem to value the influence on all success items, except for on time and business goals, on which they show statistically significant difference. Low rankings of the influence on the satisfaction of the project team and the goals of stakeholders are very close together.
The second goal was to identify which factors of change controlling contribute to a successful measurement method (H₂). Therefore a transformation of the seven success items to one success construct is computed. In addition, each five items for a change controlling characteristic are transformed to a characteristic construct. These constructs are define objectives clearly (C₂), subdivide goals into smaller packages (C₃), and communicative way (C₄). The success items consist of qualitative and quantitative success classifications. They indicate that change controlling helps to achieve certain goals within a given time frame and cost budget and complete the project covering its entire scope as quantitative classification. In addition qualitative classifications occur by the perceptions that change controlling helps to involve employees into the project and to satisfy the goals of stakeholders as well as the project team. To investigate if there is a statistically significant correlation between the dependent variable success of change controlling (C₁) and the three constructs about the measurement methodology, a correlation is conducted. The table provides the correlations which illustrate that the correlation coefficient has got a positive value for all three measurement constructs and the success dimension. This means that the consideration of the three methods increases the success of change management by using change controlling and vice versa. The strongest positive correlation can be found between success (C₁) and the subdivision of goals into smaller packages (C₃), r (278) = .874, p < 0.01. Therefore, H₂ is supported.
The third goal of the thesis was to identify the change controlling characteristics identify gaps or deviations in the progress of the implementation and if it contributes to the success of a change management project ($H_3$). Therefore a correlation is computed. The table provides the correlation coefficients which have positive values for the correlation between success ($C_1$) and deviation identification ($C_5$), $r (278) = .796$, $p < 0.01$. This means that the identification of deviations of change goals increases the success of change management by using change controlling and vice versa. Thus, $H_3$ is supported.

<table>
<thead>
<tr>
<th>Construct</th>
<th>$C_1$</th>
<th>$C_5$</th>
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<tbody>
<tr>
<td>Success of change controlling ($C_1$)</td>
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<tr>
<td>Identify gaps or deviations in the progress of the implementation ($C_5$)</td>
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<td>.796*</td>
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*Correlation is significant at the 0.01 level (2-tailed)
This study contributes to the understanding of the relationship between change controlling and change project success. In addition this study makes significant contributions to the change management literature. First, the thesis empirically derives and characterise that three attributes of change controlling influence the success of the measurement method. Specifically, these are set goals clearly, communicate the progress and define intermediate objectives. Second, the thesis provides a summary of the current state of knowledge on change management and change controlling. Specifically, the triggers for change, a definition of change and change management, as well as the key success and failure factors of change management. Furthermore the literature on change controlling is analysed, in particular the definition of change controlling, the requirements for change controlling, the evaluation of change success, and possible change controlling tools. Third, a proposal for a change controlling framework with empirically tested characteristics is made which lead to a successful change management implementation. The results of the empirical study show differences in the used monitoring tools according to the company size. In addition the study outlines differences according to the used KPIs and the suitable KPIs described by the respondents.
18. Change controlling – Future research (1/2)

In summary, according to the conclusions and limitations of this thesis, the following suggestions are drawn to contribute to future research.

- A larger research sample would allow a more comprehensive study of the effects of differences in company size and industry with regard to the effects of change controlling. Future studies might expand on these findings and help pursue the following topics and research agendas.

- The theme of this study may be extended in further research dealing with change controlling various and varied roles depending on their location in the hierarchy and within the multi-project environment.
18. Change controlling – Future research (2/2)

- Furthermore, since no one performance indicator or BSC dimension fits all scenarios, future studies should consider to tailor performance indicators and BSC dimensions for the different kinds of change.

- Finally, more cases and empirical studies are necessary to validate the usefulness of the proposed model of establishing a change controlling in depth.

- The study established that the implementation of change controlling yields better results in change management projects. Future research will push the understanding of what is established within the research project of this thesis.
Additional information

- An additional article will be published in the “Journal of Applied Leadership and Management”

- Enter the website

  http://www.journal-alm.org/index

- Search for “change controlling”
Dedication

As with most projects, many people have helped to shape this work. I would like to acknowledge their contribution here. Foremost, I would like to express my sincere gratitude to my wife and my daughter for their patience and support while I took on this endeavour to further my education. I also thank Prof. Dr. Christoph Desjardins for his helpful comments and suggestions throughout the development of this thesis. Moreover, I want to thank the ten participants of my explorative preliminary study from the “change management group” of the “Bundesverband Deutscher Unternehmensberater BDU e. V.”. They gave me important insights into the current practice of change management in Germany. Furthermore I would like to give thanks to Andreas Frick and Reinhard Wagner who made it possible that my empirical study was supported by the German Project Management Society (Deutsche Gesellschaft für Projektmanagement, GPM). Moreover, I want to give my thanks to Daniel Haag for publishing my questionnaire on the GPM website and for his comments on the design of the official invitation of the questionnaire. I would also like to express my thanks to the MBA students of the Professional School of Business & Technology for their helpful comments and discussions during and after the lectures in Kempten. In addition, I would like to extend a special note of appreciation to all participants who took part in my empirical study. Their support helped me to develop the central part of my thesis.