

Personality Traits, Competences and Success of IT-Projects

Masterarbeit

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vorgelegt von

Name: Heinze



Vorname: Imke Sarah



Prüfer: Prof. Dr. M. H. Breitner

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1 Introduction

Over the last decades, the development of information technology has progressed rapidly and became part of everyday life. Examples are digitalization, faster data-processing and new hard- or software. Moreover, information systems have improved and are integrated in the middle of the society. In addition, companies use information technology more often, e.g., to automate working steps or to support processes. Especially in the last years, mobile devices have been spread fast. In addition, the growth of the internet, cost reduction of information transfer and the possibility to transfer more data volume play an important role as well. Information technology is used various times a day and simplifies life. Therefore, people have a lot of expectations regarding IT which can support their life in several ways. The number of smart phones increased rapidly in the last years and the user can be online anytime and anywhere. In addition, smart phones are used for various things besides telephone calls or short messages, like taking pictures, listening to music, playing games, using the internet or writing E-Mails. For this reason, mobile and data networks have to be extended and strengthened to keep up with the increasing data volume or new technology has to be developed. Smart phones also need to have better processors, performance and memory chips, because the requirements of the user increase consistently. As a consequence, technology is developed further continually and technological life cycles get shorter. Moreover, internalization and globalization were assured and the competition for companies is growing. Accordingly, the business environment changes and companies have to change and meet the different increasing needs to stay competitive.¹

One possible approach is to work in IT-projects to face complex problems, work in interdisciplinary fields and be flexible. In the course of time, teams have been increasingly deployed in companies to face these challenges and have become a strong focus in research. However, it is questionable how the IT-project team has to be composed in order to manage an IT-project successfully. Various approaches and recommendations exist in literature. Within the last decades, considering personality traits as an influence factor for team compositions became focus in literature and several studies were con-

¹ Cf. Kollmann, 2011, pp. 1-10; de Sombre, 2012; AGOF, 2012; Statista, 2013; Cisco Systems, 2012; Focus, 2013; Bundesministerium für Wirtschaft und Technologie, 2012; Statistisches Bundesamt, 2012; Werner, 2013; Bea, Scheurer, & Hesselmann, 2011, pp. 2-7

ducted. However, studies concerning IT-project teams are missing. Moreover, the number of companies which work international increases and for this reason, the number of global IT-projects also grows. As a result, more and more intercultural teams are composed in order to work in global IT-projects. In some cases, the intercultural teams also work together virtually.

Therefore, the purpose of this master thesis is to examine the relationship between personality traits, competences and IT-project success. Team composition, its effect on team effectiveness and thereby on IT-project success is looked at in detail.

It is necessary for companies as well as IT-project managers² to be aware of the fact how the team has to be composed best to manage an IT-project successfully. In particular, which personality traits influence the success of teams and why should personality traits play a role in team compositions. Moreover, requirements for team members as well as IT-project managers have to be named in order to fit the right persons into the team. The findings of this thesis should support companies and IT-project managers to compose teams based on personality traits and competences.

This research is conducted by a literature review, a case study and an expert survey. The first method is used to give an overview over the current state of research. The case study presents a global IT-project which was conducted by a company operating in the IT-sector. Nineteen experts participated in the expert survey and were interviewed with the help of a questionnaire. The results of the three different methods are presented, analyzed and critically discussed. More than one type of research method was selected to use different approaches and the variety of methods shall increase the quality of the results.

In the following, the thesis is divided into nine additional sections. Firstly, personality traits in general, the Five-Factor Model or the Big Five and the NEO-PI-R will be presented in chapter two. After defining and classifying teams, characteristics of intercultural teams, including a definition of intercultural and culture, as well as a presentation of several cultural theories will follow. Then, intercultural communication and conflicts as well as virtual teams will be explained as examples for current challenges for intercultural teams. Before defining a successful team, the role of team leaders will be illustrated. In part four, the definition of projects as well as IT-projects including process

² In order to increase readability only male forms are employed in this thesis, but female forms are certainly included.

models will be presented. After naming requirements for team members, the chapter will end with the definition of successful IT-project teams. In the fifth chapter, the theoretical framework will be outlined including the derivation and presentation of five research questions. The second part of chapter five contains the research design and methods. In part six, the following three research methods will be described: Literature review, case study and expert survey. In chapter seven, the results of the three examinations are presented in three subchapters. After discussing the results critically in chapter eight, recommendations for practical applications will be illustrated in chapter nine. This thesis will conclude with the answer of the research questions, limitations of this thesis and implications for further research, a conclusion and an outlook.

each other from previous teams or not and their influence on the current IT-project team.

Moreover, personality traits and competences may change over time. It also has to be studied whether personality traits and competences are balanced out. For example, two team members with one facet positively influence the team. But, if all team members have this facet, it may affect the team negatively. Therefore, further research is necessary. Then, the influence and the changes over time have to be studied. In this thesis, the Five-Factor Model was used to analyze the relationship between personality traits and IT-project success. It is advisable to do further research with other models to confirm the results. Furthermore, the NEO-PI-R was used in the expert survey. Additional research is also necessary with other tests like NEO-FFI and the computer assisted test NEO-PI-R⁺ to show whether the results can be confirmed.

In conclusion, the relationship between personality traits, competences and IT-project success has to be studied further to confirm the existing results and to discover further influence factors, especially regarding intercultural IT-project teams.

10.4 Conclusion and Outlook

In this thesis, three different research methods were selected to use different approaches in order to study the topic from different points of view and to answer the research questions. The results of the expert survey are very comprehensive and they give a detailed view of teams in IT-projects, IT-project teams as well as requirements of team members and IT-project managers. The case study presented a global IT-project within a big company operating in the IT-sector to illustrate a real-life context. The findings of the literature review support the results of the expert survey as well as case study in a scientific matter.

The research shows that personality traits and competences influence team effectiveness and thereby IT-project success. In practice, IT-project teams are composed based on competences and resources available very often. Companies have to be aware of the fact that personality traits are crucial for the IT-project success. They have to provide enough resources in order to compose a successful IT-project based on both personality traits and competences. Certainly, this cannot be generalized, because it always depends on the given IT-project. Nonetheless, the attitudes towards personality traits have to be

changed and companies have to invest in team composition to complete IT-projects successfully. Companies also have to support team members as well as IT-project managers in several ways like team trainings, intercultural trainings or project management workshops. Moreover, agile methods like Scrum should be used to react to changes rapidly and flexible.

IT-project teams face new challenges like global IT-projects with intercultural teams, new technologies and increasing complexity of IT-projects due to various factors like globalization, change in user behavior or technological development. New technologies are developed; the complexity increases and the innovation cycles become shorter. Furthermore, the IT-projects have to be initiated and completed faster and the resources get smaller at the same time. The companies have to handle this balancing act in order to remain competitive.

Intercultural and virtual teams are also challenging for companies for various reasons such as language barriers, lack of intercultural competence or increasing requirements regarding communication skills. It will also be difficult to find team members who will fulfill the personal requirements as well as the functional competences at the same time. Overall, the influence of personality traits and competences on IT-project success is a very complex topic. This master thesis can only indicate the complexity of this topic exemplary and only some aspects could be considered. Nonetheless, these findings are very relevant and contribute to the research in IT-project teams. Moreover, the results of this master thesis can be used by IT-project managers and companies for team compositions and managing IT-project teams in order to gain team effectiveness and thereby to manage IT-projects successfully.

In conclusion, team composition based on personality traits and competences is a very current topic and crucial for the IT-project success. Companies have to pay more attention to this important topic to stay competitive and to enhance the satisfaction of all stakeholders.