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Agile project controlling in company practice – what role does the project form play?

Beitragsart (Extended Abstract)

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Abstract

In the current discussion on project controlling, agility in particular is becoming increasingly important. It is still unclear from a business perspective whether these methods really improve project management and project controlling, whether classic and agile project management and project controlling are mutually exclusive and to what extent hybrid approaches are possible in practice. Based on an empirical survey of 135 companies from 2019, this article is dedicated to examining the relationship between project management methods and project controlling in business practice.

1 Introduction

In the current management environment, aspects such as VUCA (volatility, uncertainty, complexity, ambiguity), agility, SCRUM, design thinking and KANBAN are discussed as new trends in research and practice (Korge 2017; Chirkova/Cleff 2019). However, as in the context of many other developments in business administration, it is very difficult for researchers and practitioners alike to judge *ex nunc* whether and to what extent this is a (temporary) fad or a long-term, fundamental and sustainable change or even improvement in theory and practice.

Project controlling is still a relatively new discipline within controlling (Möller/Illich-Edlinger 2018). According to DIN 69901, project controlling is responsible for ensuring the achievement of project objectives, including the comparison of target and actual figures, the identification of deviations, the evaluation of consequences and the proposal of corrective measures, participation in the planning of measures and the monitoring of the implementation of projects. In the past, the focus of project controlling has been, in addition to support in classic project management issues such as time recording and personnel planning, primarily on the evaluation and control of the success of projects, often symbolized by the "golden triangle" of time, costs and quality as well as the degree of completion of projects (Zirkler et al. 2019).

There is no theoretical, conceptual, or empirical evidence on the connection between agile corporate environments, agile project management methods, and the nature of project controlling. The research question of the paper, which has not yet been examined theoretically and empirically in this form, is as follows:

"What effects does the type of project execution - classical, agile or hybrid - have on the design of project management and project controlling as well as on project success?"

2 Hypotheses

The application of fit in the present paper postulates that the project success should be higher if the methods and instruments of the respective project type (classical, agile), which are appropriate to the project type and project management, are applied. For hybrid project management, no hypothesis can be derived in advance about the advantages of classic or agile methods and instruments of project controlling. The following hypotheses are examined in more detail for the present paper:

Hypothesis 1 refers to the relationship between the type of project and the methods and instruments of project management used. Based on the contingency theory, agile methods and instruments of project management should be used in agile projects more often than in other projects if a situational advantage is present. The hypothesis is as follows:

H1: In agile projects, agile project management instruments are used more often than in classical and hybrid projects.

The second hypothesis postulates, in analogy to H1, that agile methods and instruments of project controlling are used more often in agile projects than in classical and hybrid projects. The hypothesis is as follows:

H2: Agile project controlling instruments are used more often in agile projects than in classic and hybrid projects.

It is postulated here that decision-makers and companies in agile projects are more satisfied with the success of the project than decision-makers in classic or hybrid projects because of the perceived better adherence to deadlines and greater transparency about the degree of completion of the project. The hypothesis is as follows:

H3: In agile projects, the satisfaction with project planning and project control is higher than in classical and hybrid projects.

3 Methodology

The online questionnaire was sent to 10,053 companies and 9,164 emails were delivered. Of these, 749 people called up the survey, which corresponds to a participation rate of 8.17%, 305 people took part in the survey, but in the end 139 completed the survey. Compared to other surveys, this corresponds to a below-average response rate of 1.52%. Due to the low response rate, doubts about the usability of the results and a possible non-response bias understandably arise. Since the survey does not claim to be representative and wants to contribute to closing the research gap, at least the absolute number of responses seems to be remarkable.

4 Results

All respondents are involved in the project work. The project teams of the surveyed companies are mostly between 1 and 4 employees (53%) or 5-9 employees (30%), only a few are larger with 10-20 (8%) or over 20 employees (3%). Surprisingly, only half of the respondents have project controlling (50%), this is usually carried out by the project manager himself and only in 16 cases by a controller.

The majority of the respondents (56%) stated that they also use agile methods and structures in their projects. The method of the entire project execution is still mostly classical, e.g. the waterfall method in software development. A major trend towards purely agile project work is not evident here. The most common agile method is Scrum. Two groups of instruments were formed for the study. The classic instruments of project controlling include Work Breakdown Structure (WBS), bar plan, expert opinions, risk matrix, risk portfolio and earned value analysis. Agile methods and instruments include Sprint Backlog, Kanban Board, Daily Standup, User Stories, Product Backlog and Taksboards. A detailed list of the methods and instruments as well as a more detailed version of the empirical results can be found in Ulrich/Rieg (2020).

The respondents stated that classical instruments such as work breakdown structures, Gantt charts, expert estimates and milestone trend analyses (MTA) were most frequently used. The classic instruments are used primarily in the classic form of project execution, much less so in agile and hybrid forms of project execution. The results thus support hypothesis 1, especially for the agile instruments.

The second hypothesis examines the influence of the type of project execution on the frequency of use of key figures in project controlling. The test is carried out using multivariate variance analysis (MANOVA). The results show that in agile projects the progress completion rate, velocity and cost to completion are used more frequently than in classic projects. In hybrid projects, however, the significant results are more numerous and in some cases more pronounced than in the agile project management form, which is an interesting finding and therefore not necessarily to be expected. This may be due to the fact that the combination of the advantages of classic and agile project management methods in hybrid projects can be better subjected to agile controlling than to classic controlling using agile methods and instruments of project controlling. Hypothesis 2 can thus be isolated for agile forms of project execution and confirmed in several cases for hybrid forms of project execution.

The test of the third hypothesis is again performed using a MANOVA. It is structured in its logic analogous to the test of hypothesis 2 and contains as a comparison first the average response rate for classic project management combined with the changes for agile and hybrid project processing. The third hypothesis postulates that the project execution form influences the satisfaction with the project planning or project control. In particular, one should expect that agile project management leads to higher satisfaction. Hypothesis 3 can be supported, in agile projects the satisfaction with project planning and control is higher.

5 Discussion

This study dealt with the topic of the connection between the type of project execution, project management methods, instruments of project controlling (especially KPIs) and the influence on the success of the project.

Overall, the hypotheses put forward prove to be almost universally valid: agile methods and instruments of project management are used more frequently in agile projects. The interviewed project managers and project controllers thus confirm, at least from an empirical perspective, the influence postulated in the contingency theory of the type of project execution on the use and advantageousness of the corresponding methods and instruments of project management. This means, for example, that classical projects can be managed in an agile way and that agile projects can also be controlled in a classical way. However, in practice this is very rare and is not considered subjectively advantageous.

Literature

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