Does Agile work? - A quantitative analysis of agile project success

KEYWORDS

- Agile

Article Highlight:

This article looks at the benefits, or not, of applying an agile (i.e. flexible) method of project management, as opposed to more traditional methods.

What does the paper cover?

Methods of project management often fail to take into account changes outside the project that can be beneficial or harmful to its success. Projects that achieve the goals set at the beginning can still fail if, for example, it has ignored new technology that has been developed during its course.

By remaining open to new ideas and changes throughout the course of a project, agile methods of project management appear to contribute to a more successful end product.

THE CHARTERED BODY FOR THE PROJECT PROFESSION

The focus of agile methods:

- people (rather than processes or tools)

- technology that works well (rather than lots of documentation)

- working with customers (rather than for them)

- adapting to change (rather than always sticking to the initial plan).

Methodology:

The paper looks at over 1,000 projects in several sectors and a variety of countries. The information was collected by the authors by way of an online questionnaire, which members of the Project Management Institute (PMI) and certain LinkedIn groups were invited to complete.

Those questioned were asked to describe one more successful and one less successful project that they had worked on. Success was defined in two ways: did the project meet its allocated cost and time and its goals; and did it meet the expectations of the commissioning customers.

Research findings:

There is a correlation between using agile methods and the success of projects.

Planning: There is often just as much early planning in projects using agile methods as there are in others. In agile methods of management, planning continues throughout the project's duration and this can make a positive difference to the outcome of the project.

Sector use: Projects in technology, health care and other professional services are more likely to use agile methods than projects in other sectors. This is probably because these sectors rely heavily on software and IT; areas for which agile methods were first developed.

Goal setting: The quality of the goals set for an agile project has some bearing on its success.

Experience: The success of a project carried out using an agile method is not dependent on the experience of the project team or the complexity of the project.

Efficiency: Using agile methods are more likely to make the project successful in meeting cost and time targets but most of all in meeting customer and sponsor goals.

Conclusions:

- The study showed that agile methods had been widely used in managing projects.

- The more that agile methods had been used in a project, the greater the success of that project in meeting all its aims.

- There was no significant difference in the relationship between using agile methods and the amount of upfront planning.

- While this study showed that there is a relationship between using agile methods and the success of a project, more investigation is needed.

Significance of the research:

This was one of the first empirical studies on the use of agile methods of project management. It had the largest sample size of any such studies when it took place.

The article concludes that agile methods have a positive impact on a project's success. More research is needed to look at what impact continuous planning and the structure of that planning has on the success of a project.

Comments from author:

The data shows that that popularity of agile methods is warranted and not a business 'fad'. It does lead to more successful projects. The further adoption of agile in industries where it is common, as well as where it is not, looks set to continue.

Comments from Professor Pedro Serrador

Since this paper was published, organisational investment in agile project methodologies has accelerated. Interestingly, however, research on the applicability of agile methods remains primarily focused on 'how to' treatises or papers promoting the process as an alternative for waterfall methods. Thus, to some degree, researchers and practitioners have implicitly accepted agile as a critical means for improving project delivery without sufficient analysis and testing of its properties. Case study examples are a good first step but they are not a substitute for large-scale empirical validation.

Researchers need to continue exploring the agile methodology and rigorously test its usefulness in organisational settings. Our paper offered an important first-hand account of how agile can improve project success but much still needs to be verified (e.g. agile project methods in different industries and with different starting conditions).

Comments from Professor Jeffrey Pinto

Complete article

The original version of this article was published in the International Journal of Project Management, Vol number 33.5. Pedro Serrador, Jeffrey K. Pinto (2015) p.1040-1051. It can be accessed via: **sciencedirect.com/science/article/pii/S0263786315000071**.

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Glossary:

Agile:

a method of project management that is flexible until the last stages of the project, continually adapting to new developments and needs.